Aalto University
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RYESING ABOVE THE REST WITH STRATEGIC RESILIENCE

Kyrö Distillery Company and the COVID-19 Crisis

Master's Thesis
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Abstract of master's thesis

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Objectives Strategic resilience is about responding proactively to the threats that a company might face, by turning those threats into opportunities, which are then seized to create a competitive advantage. The objective of this study is to discover the dynamic capabilities that facilitate a competitive response during an environmental jolt. Moreover, the impact of emotional dynamics is investigated to find how they influence the identified capabilities, which they presumably do in an emotionally intense crisis-like situation. Even though dynamic capabilities have been studied in different environmental contexts, the literature has thus far largely ignored the context of an environmental jolt. This study aims to address this research gap by conducting a case study within the exceptional circumstances brought on by the coronavirus pandemic.

Methodology This research is an instrumental case study, which has been chosen as the methodology because it is especially useful for the in-depth study of broader phenomenon using a selected case as a tool. Kyrö Distillery Company has been chosen as the case company due to its distinctly successful hand sanitizer pivot, with which it responded to the pandemic. Qualitative data was gathered through seven semi-structured interviews, which were conducted with key personnel from the case company.

Findings The global pandemic and its consequent societal lockdown measures caused a crisis, which affected firms within industries in largely the same way, yet the responses of firms to that same crisis differed. This study found *five dynamic capabilities*, which enable a strategically resilient response when a firm is faced with an environmental jolt. These capabilities can be classified according to three resilience stages that take place in a crisis. In the anticipation stage, (1) shaping behaviour is in a key position for a firm to be able to identify possible opportunities with the changed circumstances. At the coping stage, it is (2) structural agility and (3) high employee engagement, which are most central. These three dynamic capabilities are also part of competitive organizational routines in other market conditions as well, together and alone. At the adapting stage, (4) resource commitment and (5) psychological commitment are critical capabilities. The importance of structural agility and resource commitment increase with market turbulence, and resource commitment together with the anticipating and coping capabilities leads to a resilient response. However, a strategically resilient response can only be elicited with the addition of psychological commitment to the prior capabilities. All of the identified dynamic capabilities classes had strong emotional microfoundations within the case company, but the antecedents of dynamic capabilities should differ from one company to the next, or else a sustained competitive advantage cannot be reached.

Keywords strategic management, strategic resilience, dynamic capabilities, environmental jolt, emotional dynamics, COVID-19

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Tavoitteet Strateginen resilienssi kuvaa proaktiivista tapaa reagoida yritykseen kohdistuviin uhkiin, jossa uhka käännetään mahdollisuudeksi ja siihen tarttumalla rakennetaan kilpailullista etua. Tämän tutkimuksen tavoitteena on selvittää mitkä dynaamiset kyvykkyydet mahdollistavat kilpailukykyisen reaktion erittäin epävarmassa toimintaympäristössä, jossa äkilliset ja yllättävät muutokset ovat tunnusomaisia. Lisäksi pyritään tutkimaan miten tunteet ja niiden johtaminen vaikuttavat tunnistettuihin kyvykkyyksiin, sillä tämän odotetaan olevan keskeisessä asemassa tunneintensiivisissä kriisitilanteissa. Vaikka dynaamisia kyvykkyyksiä on tutkittu erilaisten ulkoisten toimintaympäristöjen näkökulmasta, kirjallisuus on jättänyt lähes huomiotta niiden roolin kun toimintaympäristöön kohdistuu yllättävä shokki. Tämä tutkimus pyrkii lisäämään ymmärrystä tässä kontekstissa, hyödyntäen koronavirus pandemian aiheuttamia poikkeuksellisia markkinaolosuhteita.

Menetelmät Tutkmus on instrumentaalinen tapaustukimus, joka valittiin tutkimusmenetelmäksi koska se soveltuu erinomaisesti laajempien ilmiöiden tutkimiseen yksittäisen tapauksen kautta. Tapausyritys on Kyrö Distillery Company, joka valikoitui tapaukseksi sen poikkeuksellisen menestyksekkään käsidesipivotin ansiosta pandemian aikana. Tutkimuksen kvalitatiivinen aineisto kerättiin seitsemältä avainhenkilöltä puolistrukturoiduilla haastatteluilla.

Löydökset Vaikka maailmanlaajuinen pandemia ja sen aiheuttamat yhteiskunnalliset toimet uhkasivat yrityksiä samalla tavalla, olivat niiden reaktiot muuttuneeseen toimintaympäristöön erilaiset. Tässä tutkimuksessa löydettiin *viisi dynaamista kyvykkyyttä*, jotka mahdollistavat strategisesti resilientin reaktion kun toimintaympäristöön kohdistuu shokki. Kyvykkyydet voidaan luokitella kolmeen vaiheeseen, joita kriisitilanteessa esiintyy. Ennakointivaiheessa (1) ympäristöä muovaava käytös on avainasemassa siinä, että yritys pystyy tunnistamaan muuttuneiden olosuhteiden tuomat mahdollisuudet. Selviytymisvaiheessa keskiöön nousee (2) yrityksen rakenteellinen ketteryys, sekä (3) työntekijöiden korkea sitoutuminen. Nämä kolme dynaamista kyvykkyyttä ovat myös osa yrityksen rutiinikäyttäytymistä muissakin markkinaolosuhteissa, mutta rakenteellisen ketteryyden tärkeys korostuu ympäristössä esiintyvän turbulenssin kasvaessa. Sopeutumisvaiheen kyvykkyyksinä tunnistettiin (4) resurssien sitouttaminen ja (5) psykologinen sitoutuminen. Myös resurssien sitouttamisen tärkeys korostuu lisääntyneen turbulenssin myötä ja se yhdessä ennakointi- ja selviytymisvaiheiden kyvykkyyksien kanssa johtaa resilienttiin reaktioon. Strategista resilienssiä taas ei voi saavuttaa ilman psykologista sitoutumista muutokseen. Tunneperäiset johdannaiset olivat vahvasti läsnä kaikissa kyvykkyysluokissa, mutta samat kyvykkyydet syntyvät eri tekijöistä firmasta riippuen.

Avainsanat strateginen johtaminen, strateginen resilienssi, dynaamiset kyvykkyydet, toimintaympäristö, tunnejohtaminen, COVID-19

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1 INTRODUCTION

Within weeks of the first cases of the coronavirus (later COVID-19) being reported in Wuhan, China, on the 31st of December 2019, the virus began to spread globally like wildfire. For the first time in decades, humans were facing a disease that is extremely difficult to contain and led to death in 0,5 – 4% of cases depending on the region. The international community did not wake up to the possible implications of a global pandemic, until the virus began spreading to countries like Italy and the resultant devastation began hitting the headlines. Afterall, many of the past disease outbreaks like SARS, Ebola, bird flu and swine flu, have been successfully and quickly contained and suppressed.

On March 11th, 2020, COVID-19 was declared a global pandemic by the World Health Organization. At the time of writing this, in December 2020, there have been over 81,2 million confirmed cases collectively in 222 countries, with over 1,7 million fatalities (WHO, 2020). As events have unfolded, the multifaceted social and economic consequences have become more apparent. At the early stages of the pandemic, containment measures in China had an adverse impact on global supply chains, disrupting the flow of products to consumers. Later, the uncontrolled spread of the virus overwhelmed health services and led to many preventable deaths in countries, such as Italy, the UK, and the US.

To prevent the spread of the virus and to diminish the burden on national health services, lockdown measures were adopted in the most affected countries. First, the shutdown of international travel and tourism grounded planes globally, driving some airlines to the brink of bankruptcy. Second, governments began banning events and gatherings, essentially bringing the market for event planners, conferences, florists, and cultural producers to a sudden halt. Last, the movements of citizens were restricted with instructions to work and study remotely, while restaurants, bars and other non-essential places of business were instructed to close completely or drastically change their mode of operation.

Economically, firms of all sizes began to see major losses, with small businesses struggling to make ends meet. Unemployment figures hit record highs in the US, and it seems that the fight against the virus is potentially leading us to a global recession. Never

before have the acts of governments brought global demand to such a sudden halt, causing an exogenous shock that has sparked the COVID-19 crisis. There is no comparable occurrence in history because other crises, such as natural disasters or terrorist attacks, have been confined to a particular region. In contrast to past global pandemics, this is a completely different circumstance, as the world is at its most populous and more interconnected than ever before. This is the first time that the globalized and interdependent trade system has been tested with a crisis of this severity.

1.1 Purpose of Research

The COVID-19 crisis is highly current, but also very relevant in the future, as it will no doubt go down in history as a world changing event. This natural experiment of global scale allows us to observe the behaviour of global markets and independent firms from a perspective that has thus far been mostly theoretical. Firms in many industries have experienced a sudden and unexpected shock in their operating environment, which has affected all either directly or indirectly. Yet their responses to the current crisis have differed, as some have chosen to do nothing and wait for the storm to subside, whilst others have seized opportunities to transform themselves in a way that allows them to use their assets to generate revenues. Some businesses have achieved the latter by finding new ways to market, manufacture or deliver their old products, yet others have instead used their existing assets to make new products that are experiencing mass shortages in the global market (Wade & Bjerkan, 2020).

The COVID-19 crisis has been characterized by an extreme level of uncertainty and emotional intensity. SMEs seldom have the cash reserves or debt capacity that bigger firms do, to get through adverse times and are as such more vulnerable to external market forces (Schindehutte & Morris, 2001). If the capabilities that enable an SME to adapt in this crisis can be uncovered, then it will contribute to more SMEs being able to turn similar threats into opportunities, thus becoming more resilient and competitive. The role of emotion in this process cannot simply be ignored, because no doubt it will have played a part in a situation where people have concern for their health and that of others, and the employees of a firm fear for their jobs, and the entrepreneurs for their businesses.

This thesis will study one Finnish SME in an attempt to discover what capabilities that firm had, that enabled it to orchestrate a strategic response to the market in face of the

environmental jolt of the COVID-19 crisis. Furthermore, the emotional underpinnings of the identified dynamic capabilities will be studied to evaluate their role in the highly emotionally intense situation. This is not only an interesting topic because of its current relevancy, but also because it contributes to existing knowledge on the dynamic capabilities of firms in a largely unexplored context. The majority of current research in the domain has studied dynamic capabilities in a stable and predictable business environment, or at most in the context of a disrupted or fast-paced industry. Though these types of environments may be turbulent, they are not comparable to the conditions of an environmental jolt, such as a global pandemic, where markets and the society as a whole, are shrouded in extreme uncertainty and sudden, and often unpredictable change.

Consequently, this issue is of importance for similar future scenarios. We saw that from the ashes of the financial crisis of 2008 have emerged banks that are a lot more resilient and as such do not need to rely on governments to bail them out if such an event took place again. We will now see that if SMEs can learn from this crisis, they can build their resiliency so that they will have the capabilities required to weather the next one, and perhaps even the strategic resilience to outperform their competitors. This in turn will lead to a lesser need for government funding and diminish the risk of an economic downturn.

1.2 Theoretical Background

Generally, the research on strategy formulation and organizational behaviour is scarce and scattered within the context of environmental jolts, perhaps because of the somewhat unique, chaotic, and unprecedented nature of each crisis. When we perceive that each environmental jolt is its own unique incident, we fail to appreciate the similarity of the conditions that crises dissipate on the operating environment, and as such do not learn about an important aspect of strategic management - surviving and thriving in the harshest of conditions. In those circumstances, management must respond to a completely novel change with no visibility into the future, and after the said change has come about both rapidly and unexpectedly. Regardless, in competitive markets firms must continuously work hard to ensure their long-term survival.

This study primarily contributes to the academic discussion around the dynamic capabilities of firms. Today it is widely believed that the dynamic capabilities of firms

play a role in how they deal with changes in their external environment to remain competitive, and to ultimately create a sustained competitive advantage. Teece et al. (1997) first developed the dynamic capabilities approach to explain why some firms are able to build a competitive advantage in an environment of rapid change. This is viewed as an extension of the resource-based view of the firm, which explains competitive advantage through the internal organization and asset-base of a firm but fails to take into account why some are able to adapt better than others in changing market conditions (Eisenhardt & Martin, 2000). However, despite the study of dynamic capabilities in explaining competitive advantage in the context of environmental change, very little research has been conducted into how these capabilities manifest themselves in the most extreme conditions of an environmental jolt.

An environmental jolt is a term coined by Meyer (1982) to describe an unprecedented and sudden, although temporary event in an environment, which is both disruptive and potentially destructive. It differs from other volatile environments in terms of the speed and surprise of the change, and because the change does not necessarily lead from one equilibrium state to another, but could just as well only cause the change to be temporary. Often during these circumstances, it is unclear whether a new normal will emerge or whether there is a return to the pre-event state. Environmental jolts can impact a certain region, as was the case with 9/11, or an entire industry, as with the 2008 financial crisis. The COVID-19 pandemic has been global in scale and there is a trend of environmental jolts becoming more frequent and severe in general. Though being heterogenous events, environmental jolts do have similar traits in their consequences, which is why they should be studied in the field of strategic management (Chakrabarti, 2015).

In the context of crises, a more common topic than competitive advantage is resilience. However, resilience is most often understood as the ability to withstand stress, positively adapt to a situation, or the ability to recover and return to the pre-event state (Kantur & Işeri-Say, 2012; Björk et al., 2015; Morgan et al., 2016). Still, these responses are fundamentally different form such a response that can improve the organization's position and performance beyond its pre-event state. Therefore, *operational resilience* describes the response that aims towards recovery, whereas *strategic resilience* is a response that aims toward generating a competitive advantage (Burnard & Bhamra, 2011; Välikangas & Romme, 2012).

Legnick-Hall and Beck (2005) have proposed that strategic resilience has cognitive, behavioural, and contextual subroutines and characteristics as its antecedents, but fail to uncover what exactly they may be beyond rather generic components. Also, this proposition has largely ignored the role of emotions in those said components and does little to explain where these components arise from. Since dynamic capabilities have been used to explain the source of competitive advantage in other environmental contexts, there is no reason they should not be used to do so in the context of an environmental jolt and as the differentiator between operational and strategic resilience.

As environmental jolts are often characterized by high emotional intensity, this context is also a useful setting to add to our understanding of the emotional microfoundations of dynamic capabilities. In prior literature, Healey and Hodgkinson (2017) have highlighted that the regulation of emotions is an essential capability for leaders, or else they may not be able to ensure that their firm adapts effectively in a turbulent environment. Despite this, the failure to identify specific dynamic capabilities in different contexts means that it has also been difficult to map the effects of emotions to them beyond what is already known about the interplay between cognition and emotion in decision-making. Additionally, this area has been understudied because it lies heavily in the intersection of behavioural science and organization science. The context of an environmental jolt is expected to accentuate the emotional mechanics of dynamic capabilities, which is why this study will also contribute to that area of research.

1.3 Research Objectives

This thesis has two academic objectives and two non-academic objectives. The first academic objective is to determine which dynamic capabilities enable firms to remain competitive in an environment of high uncertainty and emotional intensity. This objective will be fulfilled by identifying the different dynamic capabilities that were used by Kyrö Distillery Company during their response to the COVID-19 crisis, and by also seeing if they differ from those used in normal circumstances. By doing that, this study aims to uncover the differentiating factors that explain why some firms were able to seize market opportunities, whilst others were slow to respond to the exogenous shock or did so with a less competitive reaction.

The second academic objective is to shed light on the role played by emotions in this context, and to investigate how they affected the dynamic capabilities that were exercised. Emotions influence cognitive processes, which is why they too need to be managed in order to bring forth their harmonizing effects and downplay their conflicting ones. The case company will be studied from this perspective, by finding out how emotions were managed, what effect they had on decision-making and what significance they had for the dynamic capabilities as a whole.

The first non-academic objective of this research is to create value for the case company, by translating the findings of this research into practical recommendations for the future. This includes suggesting how the identified dynamic capabilities should be maintained and strengthened, as well as generating a vision of which capabilities should be exercised proactively, and which reactively. Additionally, particular attention is paid to how the dynamic capabilities can be utilized in the challenges that Kyrö faces as it scales.

The second non-academic objective of this research is to contribute to the increased resiliency of the Finnish economy, by establishing how dynamic capabilities and the management of emotions should be a part of the strategic planning and crisis preparedness for SMEs. Government support is aimed at healthy firms that would do fine in the absence of a crisis, but surely the competitiveness of a firm is part of its ability to survive. There may be clearly identifiable dynamic capabilities that can significantly boost a firm's competitiveness in the face of crisis, and depending on the crisis, there may be meaningful ways in which emotions could be harnessed or regulated to activate or make the most of the firm's dynamic capabilities. These together will contribute to the resiliency, sustainability, and overall health of the national economy.

This study will attempt to reach the above objectives by answering the following research questions:

RQ 1: *Which dynamic capabilities result in a strategically resilient response during an environmental jolt?*

RQ2: *How do the emotional microfoundations affect the anticipating, coping, and adapting capacities in a founder-led company?*

1.4 Kyrö Distillery Company

Kyrö Distillery Company (later Kyrö Distillery or Kyrö) is a rapidly growing Finnish small business, which was founded in 2014 by five Finns who are originally from outside of the distilling industry. Kyrö has now grown from the original founders to 35 people in Finland and another 10 abroad. In the past six years, the revenues of the company have also surged to 4,4 million euros in 2019, which represents a 5% growth from the previous year, and the company is continuing to expand fast with the launch of new products and entry to new markets.

Kyrö Distillery specializes in the production of rye gin and rye whisky, and identifies itself as a founder-led company that is strongly guided by its values; daring, unpretentious enjoyment, communal, humorous, and trusting (Kyrö Distillery Company, 2020a; Lipiäinen, 2020: pers. comm, 19 Aug.). Originally the idea was to focus on the production of rye whisky, but because of the long barrel aging period required for a liquid to be classified as a whisky in accordance with EU regulation, the company also decided to begin the production of rye gin. Almost a surprise to all, the gin turned out to be of award-winning quality, and in 2015 the Kyrö Napue Gin was selected winner by the highly renowned International Wines and Spirits Competition (IWSC). This was a major accelerator for Kyrö Distillery Company, requiring major investments to production capacity, to the extent that whisky production was actually halted for a while.

Finally, in 2017, Kyrö released its first whisky, and has since released another in August 2020, the Kyrö Single Malt Rye Whisky, which also received immediate international praise. Since its inception, the company has sought to serve the global markets, and now exports its products to Europe, Asia, and Northern America. Its branding, marketing and market entry strategies have been executed flawlessly, which is why the company has also attracted a lot of attention as a domestic success story. In its growth journey, Kyrö has been ambitious and fastidious in its path towards a mid-sized player in the global spirits market (Ali-Melkkilä, 2019).

As is the case with most businesses globally, Kyrö Distillery Company's operations also got highly disturbed, as the global pandemic caused by the coronavirus hampered demand with on trays (bars and restaurants) and other points of distribution shutting down. Furthermore, significant risks were realized with the postponement of internal projects

and increased health concerns (Lipiäinen, 2020: pers. comm, 19 Aug.). Instead of operating with lower capacity and waiting for the markets to normalize, Kyrö decided to put its excess capacity to use and do its part in fighting the pandemic by producing hand sanitizer. This was motivated both by the prospect of helping socially and by the reluctance to furlough its employees.

As early as March 2020, the company launched its own hand sanitizer, the Kyrö Hand Desi, with Kyrö (2020b, 18 Mar.) announcing in an Instagram post that distribution would be carried out by prioritizing critical functions, such as hospitals, elderly care, and cleaning companies. Later, the product was also made available to retailers and consumers and can be found readily available in stores around Finland and Germany, as conveyed in Figure 1 below.

Figure 1 *Kyrö hand sanitizer, Hand Desi, sold on the shelves of the Alepa chain in Helsinki, Finland in August 2020*

This strategic and innovative pivot embarked on by Kyrö Distillery, has been hugely successful, to the extent that it enabled the company to cancel the planned furloughs of its employees. This despite some challenges in the logistics side of securing certain sought-after supplies needed to produce the hand sanitizer. In the end, the company was able to supply the product to critical functions, as planned, helping to close the demand gap in the market. The product was also sold directly to, which was also a huge success, with the company also selling the product in a small kiosk in Helsinki in collaboration with Tenho Restobar. Not only that, Kyrö has also collaborated with the Finnish airline Finnair, to supply hand sanitizer for passengers onboard, to ensure as safe a flight as possible during the pandemic, as depicted in Figure 2.

Figure 2 *Kyrö has partnered with Finnair to provide its Hand Desi to aircraft passengers during the pandemic*

All in all, Kyrö Distillery has been able to answer societal needs rapidly during the global crisis and been able to sizeably limit the financial impact of the pandemic on the firm itself. Furthermore, the visibility and positive spill over effects on the brand have been undeniable. Although other companies soon followed suit in responding strategically to the pandemic, a few were able to do so as rapidly and successfully as Kyrö Distillery Company. This is indicative of the company possessing some dynamic capabilities, which were at the core of its strategic resilience, and as such makes this a highly suitable case company for the study of the research questions presented above.

1.5 Structure

The rest of this thesis is organized as follows. The next section will focus on a review of relevant literature that will give an extended background to the concepts and theories that are central to this study. Section 3 will give an account of the methodology that is used to conduct the study and answer the research question. Section 4 will present the findings of the study and Section 5 will continue onto a discussion of their implications. This will finally be followed by concluding remarks and suggestions for further research in Section 6.

2 LITERATURE REVIEW

At the core of strategic management, is coping with change in the firm's external environment (Chakravarathy, 1986). The strategy must be aligned with the operating environment, and must also be renewed when circumstances change, so that the firm can survive and sustain a competitive advantage. This is a complex endeavour, for which there are varying approaches depending on the context, organizational traits, and industry characteristics. Regardless, adapting to environmental changes becomes all the more challenging as environmental complexity and unpredictability increase (Morais-Storz et al., 2018). Therefore, top management teams must continuously revisit, reflect, and adjust their strategies to ensure that they are aligned with the changing cues of the competitive landscape, or face the consequences of becoming uncompetitive.

2.1 Environmental Change

Strategizing is heavily affected by the state of the external operating environment, because management must reconcile the environmental conditions with the organization's capabilities and resources to create a successful strategy (Bourgeois, 1985). Aldrich (2008) recaps, that before the 1960's, the study of organizations had been conducted without regard for their operating environment, and as such little had been discovered about the organizational characteristics that allow a firm to survive in particular environmental conditions. His work in the field gave rise to attempts to conceptually capture different environmental characteristics.

Dess and Beard (1984) define three dimensions for organizational environments, which are munificence, dynamism, and complexity. Munificence refers to the capacity of the environment, which is the extent to which it allows organizations to reach growth and stability. Dynamism in turn, is the degree of instability in the environment, and is dependent on its variability, whereas complexity is descriptive of the heterogeneity within the environment, referring to the amount of information that needs to be processed. Moreover, Bourgeois (1985: 554) adds volatility to that list of attributes, arguing that it captures unpredictable discontinuities, which "as opposed to complexity, in an environment create the most risk and difficulty for effective strategy making."

Volatility became more important as an environmental dimension when technological change began to take on more rapid turns in the mid-1970's. This was marked with the

emergence of IBM and Apple, creating a market of unequivocally rapid, regular yet unpredictable change. Bourgeois and Eisenhardt (1988) drew attention to this new type of turbulence, realizing its necessary effect on strategic decision-making. They termed operating under these new conditions as a *high-velocity environment*, where "there is rapid and discontinuous change in demand, competitors, technology and/or regulation, such that information is often inaccurate, unavailable, or obsolete" (Bourgeois & Eisenhardt, 1988: 816). In essence then, this is an environment that is continuously dynamic, complex, and volatile, on top of which the circumstances change very fast.

Another term that has also emerged to describe the above type of environment, is turbulence. However, not all environments are made the same and it has been recognized that the degree of turbulence varies between environments. Ansoff and McDonnell (1990) drafted a model for five levels of turbulence, as presented by Kurtz and Varvakis (2016: 24) and depicted in Table 1 below.

	Turbulence level	**1**	**2**	**3**	**4**	**5**
Changeability	**Complexity**	National Economic	-	Regional Technological	-	Global Socio-Political
	Familiarity of events	Familiar	Extrapolable		Discontinuous Familiar	Discontinuous Novel
Predictability	**Rapidity of Change**	Slower than response		Comparable to response		Faster than response
	Visibility of Future	Recurring	Forecastable	Predictable	Partially predictable	Unpredictable surprises

Table 1 *Ansoff and McDonnell's (1990) levels of turbulence (Kurtz & Varvakis, 2016: 24)*

At the first level, the environment is stable, and changes are highly predictable, which gives a high level of visibility into the future. For instance, it could be argued that cyclical industries such as forestry operate at this level. The second level is one that is expanding, where there are segments in the economy that are rapidly growing and causing demand in those areas to soar. At this level, the change is again visible and predictable, which means that planning is extrapolative, and firms can strategize through production and efficiency. The third level can be described as changing, where change is visible and incremental, albeit fast. Success in such an environment demands strategies in product

differentiation and marketing. Finally, the levels four and five are environments of discontinuous and unpredictable change, where historical events are of little use as a tool to project the future (Kurtz & Varvakis, 2016).

The difference between the last two levels is that at level four, disruptive, yet familiar events may occur, which require firms to strategically and radically change from their historical attachments, whereas at level five the change is also surprising, possibly global and extremely fast. These elements of surprise, scale, and rapidity are what makes the highest level of turbulence distinct, resulting in a lack of visibility and predictability. At this level, firms must innovate and be extremely flexible to succeed (Kurtz & Varvakis, 2016).

2.1.1 Environmental jolt

Ansoff and McDonnell's (1990) levels of turbulence and Bourgeois and Eisenhardt's (1988) high-velocity environments describe environments that have differing levels of munificence, dynamism, complexity, and volatility. However, these different environmental conditions describe a flux in the operating environment, where changes shift from one continuous state to the next. These environments may exhibit first- and second-order change, where the prior is a continuous series of smaller changes, and the latter more dramatic discontinuous changes (Meyer et al., 1990). First-order change can be thought of as evolutionary, and the second-order change as revolutionary.

Yet, there are also circumstances that temporarily destabilize an operating environment, but not necessarily in such a manner where it shifts from one equilibrium state to another (Lengnick-Hall & Beck, 2005). This situation was termed by Meyer (1982) as an environmental jolt, which is an unprecedented and sudden, although temporary event in the environment, which is both disruptive and potentially inimical. The difference between an environmental jolt and a high-velocity environment for instance, is that an environmental jolt is transient and can affect both stable and dynamic environments (Colombo et al., 2020). Likewise, it may be mild or severe and can affect specific organizations, industries, or entire economies (Brege & Brandes, 1993; Singh & Yip, 2000; Sheppard & Chowdhury, 2005).

Environmental jolts are seemingly heterogenous, with some examples of jolts including the burst of the dot-com bubble in the year 2000, the 9/11 terrorist attack, the 2008 financial crisis, and most recently, the COVID-19 pandemic (Colombo et al., 2020). Chakrabarti (2015) explains, that although these shocks to the environment may seem impossible to predict, such as in the case of a natural disaster, some of them do have more systematic causes that lead to the jolt, as for instance was the case with the 2008 financial crisis. Although environmental jolts are very different in nature and may differ in their underlying causes, there are some similar traits in their consequences. First, there is typically a sudden and dramatic decrease in the demand for current products, either due to adverse economic or political conditions, or from a dramatic increase in competition. Second, firm's experience limited access to external resources, because of the high level of uncertainty in the environment. Third, there is a possibility that jolts also present some novel opportunities with a promise of great rewards for those who seize them (Chakrabarti, 2015; Colombo et al., 2020).

Environmental jolts are typically crisis-shocks, which pose a major threat to the survival of the organizations they affect. However, compared to other types of environments, this context is by far underrepresented in management literature. This is perhaps because of the difficulty in conducting longitudinal studies on the matter, and the fact that the unpredictability of the jolt often means that the phenomena is studied after the fact. Furthermore, scholars may perceive environmental jolts as unique individual events that happen seldom and are highly complex, which discourages research in this area.

Indeed, the more common field of study in this context is the resilience of organizations, especially regarding the capability to survive or withstand an event. At the same time, an environmental jolt has been shown to present opportunities to improve competitiveness and seize opportunities. For instance, Lengnick-Hall and Beck (2005) recount how Nokia experienced an environmental jolt when its supplier Philips Electronics had a fire at its chip factory. Instead of merely surviving the crisis, it emerged out of it with improved supplier relationships and a competitive advantage over its key rival. Since building a sustained competitive advantage is at the core of strategic management, it is important to learn how it can be built also in the context of an environmental jolt.

2.2 Resilience

Resilience is a term that is synonymous with survival, but a concept that has been defined differently depending on the context. In terms of information systems, it means being able to continue delivering the services that are intended of those systems, despite adversities that they may face (Björk et al., 2015). Then again with people, it is about being able to positively adapt to adverse situations (Morgan et al., 2016). So, what then is resilience when it comes to organizations, which contain both of these elements and many more?

Meyer (1982) first paid attention to resilience in the organizational context, when he noticed that a sudden and unprecedented environmental jolt, a doctors' strike, led to some very different reactions by hospitals. Despite the environmental conditions being the same for all of them, some responded by absorbing the impact of the crisis, whilst others adapted to the crisis. Meyer (1982) highlights, that the event brought to light some organizational properties that were not visible during more stable environmental conditions. He studied the strategies, structures, ideologies, and stockpiles of slack resources in the hospitals prior to the environmental jolt, to deduce if they acted as predictors of a particular response. The study found that it was the organization's ideologies that very much shaped its reaction, but that rigid organizational structures constrained those reactions. In turn, the impact of the jolt differed depending on the market strategy of the organization and its slack resources (Meyer, 1982).

The above study suggests, that the more diversified the markets served and the more resources the firm has, the more likely it is to absorb the impact of an environmental change. Conversely, the more entrepreneurial and shaping the organizational ideology and values, and the less rigid its structure, the more likely it is to adapt. This would imply that smaller organizations in particular would be more prone to adapt, and larger incumbent organizations to absorb. Indeed, North & Varivakis (2016: 6) cite Detarsio (2013) when they point out that, SMEs are better equipped for reacting to changing situations, as they are typically more flexible with fewer organizational structures.

However, the issue is not as straightforward, as there can be various combinations of the given qualities, where for instance a firm could have an entrepreneurial ideology and plentiful resources but could be very rigid in its structures and have a niche market strategy. Furthermore, even if a firm adapts to the changed conditions, it can do so in such

a way that the outcome is the same as that of a competitor that absorbs the change, all the while the real winners are those that can adapt and capitalize on the situation. Perhaps then, it would be wiser to categorize the reactions of firm's through not the way they respond, i.e. through absorption and adaptation, but instead in terms of the outcome of that response, which is either surviving the jolt or thriving as a result of it.

The study of resilience in the organizational context has been rather scattered and led to very different definitions of the concept. Kantur and Işeri-Say (2012) have synthesized the literature in the field and reached the conclusion that there are two streams of thought for what it means for an organization to be resilient. The first is that resilience is about pre-event readiness and developing the capabilities to efficiently recover from a disruptive event. The second is that resilience is about the ability to respond creatively and in such a manner that the organization is improved beyond its pre-event state (Kantur & Işeri-Say, 2012). In this paper, operational resilience is used to refer to the prior, and strategic resilience to the latter.

2.2.1 Operational resilience

Operational resilience is the "ability to bounce back after a crisis – or more broadly, to respond to adversity" (Välikangas & Romme, 2012: 44). It should be noted that operational resilience is both seen as a necessary capability to recover from sudden shocks, but also as one that should be continuously exercised because of the dynamic operating environment that is riddled with disturbances. This ties resilience closely with both absorption and adaptation. However, it should be noted that operational resilience allows a firm to survive, but does not build significant competitive advantage over others, unless there is a lack of such resilience on their part. To understand what builds operational resilience, we must turn to past literature.

Weick (1993) attempted to form an understanding of the factors that contribute toward organizational resilience, through studying the Mann Gulch fire disaster. As a result of this study, Weick (1993) proposed that there are four components to resilience, which is built as a result of minimizing disruption to role structure and sensemaking, that is the contextual rationality that is needed to make strategic decisions in the face of adversity. These components are improvisation, virtual role systems, the attitude of wisdom, and the norms of respectful interaction (Weick, 1993).

Weick (1993: 639) asserts that there is a tendency for the typical role systems of an organization to disintegrate in a crisis, but in a resilient organization, its people have developed the capability of improvisation and bricolage, whereby they have the ability to act creatively under pressure and "proceed with whatever materials are at hand". This ability is a result of having to routinely act in chaotic circumstances, where people have to find creative solutions to problems (Weick, 1993). This view is shared by Mallak (1998), who names bricolage as an essential element of resilience, because it means that individuals within the organization can troubleshoot problems as they arise, rather than seeking attention, time, and resources from elsewhere in the company.

However, Mallak (1998) argues that bricolage by itself can be redundant if people are not given sufficient decision-making authority and access to resources. This suggests, that though some individuals within an organization can have bricoleur-like tendencies, the actual role of a bricoleur can only be realized by some. This may not necessarily be a bad thing, because continuous improvisation can easily lead a firm to chaos and distort internal roles and routines. More than individual resilience, Coutu (2002) argues that it is the organization that must possess the capability to improvise, rather than its individual members.

The second component is the construction of virtual role systems, which means that people are able to take note of the different roles in the team and reconstruct it in their heads even though the actual role structure has collapsed (Weick, 1993). Weick (1993) argues, that virtual role systems allow individuals to pick up any activity within the group and also to use their sense of the different roles to guide individual actions. Again, Mallak (1998) concurs and stresses that virtual role systems can be crucial in terms of ensuring continuity, but also adds that when each person knows the roles of others, it helps them to visualize the larger purpose of the entire team.

Coutu (2002) explains that a sense of purpose and meaning are the cornerstone of both individual and organizational resilience, because they allow dynamic meaning making, where a bridge is built from the struggles of the present to the promises of better times in the future. However, instead of virtual role systems, Coutu (2002) names a shared system of values as being the better way of instilling meaning, as people will adopt a unified way of interpreting events around them. More important than the content of the values, is the fact that they are shared by everyone in the organization and kept rather constant, as

exemplified by the Catholic Church, which has continued to prevail despite the most detrimental hardships over its existence (Coutu, 2002).

In Mallak's (1999) later framework on organizational resilience, he too names values as a factor in building resilience, but also stresses the individual perspective in that members of the organization should have a congruence between their own values and those of an organization. Indeed, it is hard to work for, let alone fight for something that one does not believe in. Horne III and Orr (1998), who have named seven streams of resilience behaviour, have termed this as *community*, which is that the people in an organization have a shared purpose, which also overlaps with their self-interests. They also argue that this sense of meaning and values should be strongly embedded in organizational culture (Horne III & Orr, 1998).

Weick (1993) argues that an attitude of wisdom improves adaptability during times of uncertainty. With this, he means that the organization has awareness of their own lack of understanding when faced with a novel event, and simultaneously avoid extreme caution and extreme confidence, which incite fear and kill curiosity respectively (Weick, 1993). This is an attitude rather than a skill, where the organization leverages its past experience, while simultaneously inviting doubt and shaping past learnings to fit the present situation (Weick, 1993). This is also strongly linked with how an organization perceives the situation it is in, and there are some major contradictions in what scholars argue to be a resilience-building awareness of reality.

Based on resilience studies within child psychology, Mallak (1998) makes the point that a positive perception of events should be maintained, and this perception cultivated through framing events and problems positively. He argues that this combats the feeling of helplessness that may arise in a crisis and result in negative coping strategies that steer the firm away from problem solving (Mallak, 1998). On the contrary, Coutu (2002) draws on the studies of holocaust survivors, arguing that a realistic, or even pessimistic sense of reality is more important than optimism, which may instead distort reality. It is claimed that facing reality, rather than sugar coating or denying it, is most effective because it prompts people to prepare themselves for enduring the hardships ahead (Coutu, 2002). It could be that both positive and realistic perceptions are needed, because Mallak (1998) most argues for framing individual problems positively to instil a sense of their solvability. Coutu (2002) on the other hand is talking about a realistic perception of the

situation as a whole, much like Weick's (1993) attitude of wisdom, where in order to identify the relevant problems to be solved, the organization must have a realistic understanding of what is going on and what their strengths and vulnerabilities are in relation to it.

Last, Weick (1993) names respectful interaction as a source of resilience, at the bottom of which lie honesty, trust, and self-respect. This is because when role systems and structures collapse, the best options become to mutually adapt, to blindly imitate creative solutions, and to trustfully comply (ibid). However, when there is a lack of belief in what others are reporting, i.e. a lack of trust, or lack of honesty, or a failure to trust one's own intuition and reasoning in synthesizing information, then everyone is on their own and fear can become overwhelming (Weick, 1993). So again, this view can be tied into the culture of the firm and its set of values, which can serve as a guiding compass for building trust and a sense of community. This in turn promotes a sense of togetherness and requires a less structured system, because teams can improvise in the absence of formal structure.

A similar element is described by Horne III and Orr (1998), who say that it is *commitment*, a sense of trust and goodwill, which creates the ability of the organization to work together in uncertain times. However, neither Weick (1993) nor Horne III and Orr (1998) go on to elaborate how exactly trust and honesty should be cultivated, although Horne III and Orr (1998) do recognize that this ability is closely tied with competence, coordination, and the relationships within an organization.

It is clear that there is an absence of a comprehensive framework on the elements that build operational resilience in organizations. This is due to the fact that scholars use a variety of different definitions for resilience, and there is a fundamental misalignment in the perception of the origins of resilience. Some view that resilience is result of resilient individuals (Mallak, 1998), others that a collection of resilient individuals do not make an organization itself resilient (Horne III & Orr, 1998). These perspectives direct discussion either toward theory building through behavioural psychology, or organizational adaptation. Furthermore, many of the suggested resiliency-building capabilities are haphazard lists of overlapping elements. For instance, Mallak (1998) names ensuring resources or expanding decision-making boundaries as capabilities when they are in fact not skills that can be developed, but rather management mechanisms and assets that can be acquired. Similarly, Weick (1993) explicitly states that an attitude of

wisdom is not a skill, though to be fair his research merely names potential sources of resilience, rather than formally argues for them to be capabilities. Overall, however, it was identified that improvisation, or bricolage, a shared purpose, the perception of events and trust are factors that have consensus as contributing to operational resilience.

Nonetheless, operational resilience, which is focused on the preparedness and recovery of an organization can indeed be comprised of elements that can be simply acquired or adopted without the development of more sophisticated capabilities, because it is a survival mechanism and not a competitive tool. That is not to say that a more thorough understanding of the antecedents of operational resilience is not needed, but perhaps it is an even more pressing matter to determine what the more difficult elements are, which allow organizations to excel competitively in challenging circumstances through strategic resilience.

2.2.2 Strategic resilience

Reeves and Deimler (2009) have studied resilience in the context of an economic downturn, and state that survival strategies buy companies time, but do not create a sustainable competitive advantage. This same perspective has led to broader definitions of resilience in the organizational context, whereby its objective is not only for the organization to recover to its original state, but instead to turn challenges into opportunities and strive for a superior performance than before (Lengnick-Hall & Beck, 2003). What makes organizational resilience different from the definition of resilience in other contexts, is that companies have the all-encompassing goal of generating a competitive advantage (Burnard & Bhamra, 2011). This leads Burnard and Bhamra (2011: 5587) to propose that 'the potential for developing a sustainable competitive advantage may reside in an organisation's ability to develop strategic resilience'.

Hamel and Välikangas (2003) have used the term *strategic resilience*, to describe that resilience should focus on the proactive shaping of an organization's future, rather than the defending of its past, all the while anticipating those deeper trends that may be detrimental to an organization. Similarly, Välikangas and Romme (2012: 44) have defined strategic resilience as, 'the ability to turn threats into opportunities before it is too late – that is to effectively respond to opportunity.' This definition has been adopted here to describe proactive resilience, whereby an organization is able to use an adverse event

to its competitive advantage and emerge as a stronger version of itself than it was prior to the event. Although all organizations should build operational resilience to prepare for adversities, strategic resilience should be built so that the organization has the capability to turn surprising threats into opportunities (Välikangas & Romme, 2012).

Strategic resilience is not only beneficial in turbulent and changing markets with continuous threats, but even more so during environmental jolts. In fact, Burnard and Bhamra (2011) describe today's operating environment as having an increasing amount of high-impact/low-probability events. The risk of an environmental jolt tends to be far greater to an organization, yet the rewards of capturing an opportunity also similarly higher. A now legendary example of such an occurrence is from the financial crisis of 2008, of which one can read of from Michael Lewis' (2010) book and its subsequent movie, *The Big Short.*

Winnard et al. (2014) have developed the concept of strategic resilience, by adding that firms should be able to proactively respond to events without causing themselves so called *trauma*. This refers to the capability to renew itself strategically, without a waste of resources, which would then undermine competitive advantage (Winnard et al., 2014). Therefore, strategic resilience is not just any proactive change, but one that should take place fairly painlessly for the organization. Furthermore, Youssef and Luthans (2007) state that in reactive resilience, there are potential setbacks and traumas that the organization faces, which can also take place if the events are positive. However, it is the proactive nature of strategic resilience, which means that those setbacks can be used as opportunities for growth (Youssef & Luthans, 2007).

According to Winnard et al. (2014), the difference between operationally resilient and strategically resilient organizations is adaptive capacity. This refers to the ability of the organization to evolve and create novelty and learning to accommodate for environmental threats and changes (Bhamra et al., 2011). This point of view has also been adopted by Lengnick-Hall and Beck (2005) who propose that resilience capacity arises as a result of adaptive fit, but that adaptive fit needs to be approached differently depending on the environmental context.

Chakravarthy (1982) has devised a prominent framework on adaptation, where there are three states of adaptive fit with a firm's external environment: unstable fit, stable fit, and

neutral fit. However, Lengnick-Hall and Beck (2005) describe that a key underlying assumption in this framework is the shift of the environment from one equilibrium state to another. Whilst this may be true for turbulent and high-velocity environments, the assumption does not hold for environmental jolts. As a result, they propose that, what is termed *robust transformation*, should be the applied in these circumstances, which enables the firm to adapt to environmental change without the presumption that the environmental conditions shift permanently. It is defined as, 'a deliberately transient, episodic response to a new, yet fluid, environmental condition' (Lengnick-Hall & Beck, 2005: 742). It is suggested that robust transformation allows a firm to capitalize on the environmental change by generating new alternatives and capabilities for it (Lengnick-Hall & Beck, 2005).

Though robust transformation is also based on the ability to proactively respond to environmental jolts, it is founded in organizational routines. In fact, it is argued that robust transformation requires the development of complexity absorbing routines, which allow the firm to stay sufficiently flexible so that it is not locked-in to its adaptation with the current environment but can tolerate complexity by having its options open for a broad array of potential actions. It is assumed, that there is a dynamic tension between creativity and productivity, instead of an optimal balance, in addition to which surplus resources are invested into developing responsiveness, flexibility, and expanded action, instead of a high-level of congruence with the environment. However, these tendencies and routines that develop complexity absorption are rooted in the organization's past experiences, capabilities, resources, and perspectives. Therefore, robust transformation is essentially the ability to tolerate high-levels of complexity, which gives the organization the possibility for more ways of responding and developing capabilities when faced with novel, but temporary circumstances (Lengnick-Hall & Beck, 2005).

As said, robust transformation is an appropriate response to environmental jolts, but firms must be able to assess whether the environment demands this type of change, or adaptive fit in a turbulent environment. This is also a part of strategic resilience, as it allows the firm to select the most appropriate response for the situation at hand. This Lengnick-Hall and Beck (2005) term resilience capacity, which consists of cognitive, behavioural, and contextual properties, combining six organizational subroutines and characteristics to create a foundation for strategic resilience (Lengnick-Hall & Beck, 2005).

Cognitive resilience is the capability of the organization to notice and analyse potential responses such that they go beyond surviving a crisis, and instead toward identifying opportunities (Lengnick-Hall & Beck, 2005). This is theorized to be a composition of constructive sensemaking and a strong ideological identity, where the prior is the ability to interpret current circumstances beyond the usual explanations, and the latter a value-driven core identity that is at the heart of organizational decision-making (ibid). Constructive sensemaking bares strong resemblance with the individual resilience capabilities, such as positive framing and realistic perceptions discussed in the literature on operational resilience (Mallak, 1998; Coutu, 2002).

Similarly, Vogus and Sutcliffe (2007) also claim that resilience lies in part in cognitive processes but note that there are also emotional underpinnings to organizational resilience, which have remained largely underexplored. They remark that emotions likely affect cognitive processes, where for instance optimism gives rise to positive emotion, but runs the risk of creating overconfidence (Vogus & Sutcliffe, 2007). Much like Coutu (2007), they identify a realistic perception to be a characteristic of strategically resilient organizations, where there is a degree of pessimism in the resilience of the organization, thus driving it to give continuous attention to the cause, whilst remaining optimistic about being able to overcome difficulties, something they call a hopeful approach (Vogus & Sutcliffe, 2007).

Behavioural resilience in turn is what enables the organization to develop knowledge of its situation and act through its resources and capabilities. This epitomizes the availability of various reactions, as the organization maintains a diverse set of possible actions they can take in changing situations. The more alternatives a firm has for competitive actions, the more likely it is to respond in a timely and more innovative manner (Ferrier et al., 1999). Moreover, behavioural resilience is borne out of functional habits, which are rehearsed routines for open communication channels, interpersonal ties, and seeking information from multiple sources. Vogus and Sutcliffe (2007) agree and name structural flexibility as a mechanism of a resilient organization. It seems that behavioural resilience contains routines that are embedded in the organizations operations but present themselves as resilience capabilities when confronted with an abrupt change, such as an environmental jolt (Lengnick-Hall & Beck, 2005).

Last, contextual resilience is the setting in which cognitive and behavioural resilience are used and integrated (Lengnick-Hall & Beck, 2005). Here, social capital and broad resource networks are in a key position, where social capital is the goodwill that the organization and its individuals have available to them, and the broad resource networks the tangible and intangible resources that the organization is capable of obtaining externally (Adler & Kwon, 2002; Lengnick-Hall & Beck, 2005). The same element of trust that was named in Weick's (1993) respectful interaction is strongly present in the notion of social capital, which is most effectively built through repeated interactions that are based on trust (Ireland et al., 2002).

There is strong backing for the perspective that strategic resilience comes from the adaptive capabilities of organizations, which when coupled with operational resilience allows organizations to both shield themselves from the trauma of the environmental jolt, whilst simultaneously seizing opportunities from the situation, hence being able to build a competitive advantage. This is also evident from the Lengnick-Hall and Beck's (2005) cognitive, behavioural, and contextual components, of resilience capacity, depicted in Figure 3 below, which incorporate capabilities from both operational and strategic resilience. However, there is an absence of knowledge as to the emotional contributors of strategic resilience, as well as a failure to trace what exactly are the components that make a difference between robust transformation and adaptive fit.

Cognitive	**Behavioural**	**Contextual**
Constructive sensemaking	Complex and varied action inventory	Social capital
Strong ideological identity	Functional habits	Broad resource networks

Figure 3 *The organizational subroutines and characteristics that build resilience capacity, i.e. strategic resilience* (Lengnick-Hall & Beck, 2005)

Moreover, it is recognized that resilience includes a mix of different capabilities, but authors do not clarify what they mean by capabilities (Ruiz-Martin et al., 2018). Neither do they comprehensively explain what the origins of specific capabilities are, but name general capabilities and routines instead (Duchek, 2020). These are of little help in giving insight into how firms can become strategically resilient in practice. To increase our understanding in this regard, it may be useful to examine strategic resilience from the

perspective of competitiveness and dynamic capabilities, which have long been studied as those capabilities that give rise to a sustained competitive advantage.

2.3 Competitiveness

Dealing with environmental change is a central strategic challenge, but as established before, it is integral to building competitiveness through strategic resilience (Eisenhardt & Brown, 1998). Scholars have attempted to trace the origins of what makes a firm competitive, so that managers can be equipped with the right tools to ensure the survival and sustainable success of their organizations in competitive markets. The literary positions for how firms should change to achieve competitiveness have evolved through time. In the 1980s, strategic management focused on approaches for positioning in the market and competing by restructuring and value chain configuration. Later, in the 1990s, the discussion shifted to resources and capabilities that promote core competencies, which was later followed by current approaches, one of which is the development of dynamic capabilities, which considers capabilities, organizational learning, and the reconfiguration of resources in tandem, for building a sustained competitive advantage in a dynamic environment (Leibold et al., 2002 cited in North & Varvakis, 2016: 7).

2.3.1 Resource-based view of the firm

The resource-based theory is founded on the principle that competitive advantage stems from the firm's internal resources rather than its external market positions. That is, a firm uses its resources to sustain a competitive advantage by exploiting its internal strengths and responding appropriately to external opportunities, whilst avoiding its weaknesses and eliminating potential threats (Barney, 1991). This perspective has been applied in some early strategy literature that defines corporate strategy in terms of a firm's resource position, which acts as the foundation of its strengths and weaknesses, in contrast to the strategy definitions that primarily focus on the objectives that firms set, and the processes required to reach them (Andrews, 1971).

With time, the resource-based theory has developed into a more refined perspective, known as the *resource-based view of the firm (RBV)*. Wernerfelt's (1984) early work attempted to formalize the RBV by linking resources to products by analysing them using Porter's (1980) five forces framework. This led to the proposition of an analytical tool, which firms can use to map profitability to their resources, thereby suggesting that

contrary to the assertions of Porter (1985), a firm's performance is not driven by its products, but rather by its resources that give rise to their production. As a result, a firm can observe its strategic options by the available choices it has for manipulating its resource positions. In this way, successful strategies would be solely dependent on the internal resource configurations of firms (Wernerfelt, 1984).

Porter's (1985) theory of sustainable competitive advantage relies on various underlying assumptions, which Barney (1991) has also challenged in favour of the RBV. The first assumption is that firms are identical in terms of their strategic resources, and the second that these resources are perfectly mobile. In this context, resources are seen as all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. that enable a firm to formulate and implement effectiveness and efficiency improving strategies (Raduan et al., 2009). Barney (1991) maintains that the above assumptions do not hold. Instead, he argues that it is possible that a firm can develop a sustained competitive advantage by acquiring unique resources that are difficult for competitors to replicate or procure. Thus, the RBV assumes that resources may be heterogeneous and immobile across an industry. Of course, the resources that are not so, are either required in the industry to participate in it, are redundant, or are easily replicable by competitors and as such irrelevant in terms of a source of a competitive advantage. As such, these resources can also be intangible in nature, involving psychological, cultural, or social complexities that are unique to an organization.

There are four properties for evaluating resources in the RBV, which are commonly referred to as the VRIN-attributes, standing for *valuable*, *rare*, *inimitable* and *nonsubstitutable* (Eisenhardt & Martin, 2000). A resource that is valuable for seizing opportunities or neutralizing threats, and rare amongst current and future rivals, is merely enough to create a competitive advantage. A resource that can create a *sustained* competitive advantage must not only be valuable and rare, but also imperfectly imitable and must not have strategically equivalent substitutes (Barney, 1991; Newbert, 2007). The above attributes have been given in Barney's (1991) framework, which proved to be seminal within the field of RBV research, as it was the most formalized description of the approach.

The RBV however, is neither without its critics. Where Barney (1991) criticized the assumptions held by Porter (1985), Priem and Butler (2001) point out that the RBV is

guilty of the same fallacies. Indeed, the prior models for strategic analysis held the implicit assumptions of homogenous and mobile factor markets, which are likely unrealistic, yet similarly, the RBV assumes the same of product markets. This is because it fails to consider the changes that environmental factors may have on the value of resources, and as such the resource values are dynamic, not constant. Furthermore, unlike most other strategy theories, the RBV approach fails to establish a context or boundary conditions in which the theory is applicable. This may be one reason why the concept has to some extent unravelled over time, from one that is dynamic, and addresses change over time, to becoming more static in empirical research (Priem & Butler, 2001).

The RBV has also been critiqued for being a black-box, because it is assumed that as soon as firms become aware of the resources that fulfil the VRIN-attributes, they will automatically realize and be able to exploit them (Barney, 2001; Priem & Butler, 2001). Mahoney and Pandain (1992) characterize this as ignoring the link between resource possession and resource exploitation, which could mean that competitive advantage stemming from the better use of resources could be overlooked. Therefore, merely possessing a VRIN-resource is insufficient, but firms must be able to recognize and routinely produce and replicate the resource in order to use it to generate a competitive advantage. Not only that, but industries are under constant threat of disruption and other forms of rapid change, where the resources that allowed them to sustain a competitive advantage may no longer be relevant. The RBV then should include a resource that allows a firm to repeatably deal with the changing external environment better than its competitors.

2.3.2 Dynamic capabilities

> *'It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is the most adaptable to change.'*
>
> - Darwin (1859) cited in North & Varvakis (2016: v)

Darwin's evolutionary theory on natural selection has long been accepted in science as a fundamental rule of nature, which helps us to make sense of the past and present state of our external environment and existence. It is also applicable in the context of strategic management, where it is now widely accepted firms must be adaptable and proactive in the market in order to survive. Survival in turn is best guaranteed by developing a

sustained competitive advantage in comparison to competitors, but as demonstrated by Wiggins and Ruefli (2005) the increasingly complex and volatile nature of industries is making this much more difficult to achieve in the long-term. Recognizing this trend, Teece (1997) proposed that building dynamic capabilities is what allows firms to create a competitive advantage that can be sustained in increasingly turbulent environments. The proposition was pivotal and has since become a cornerstone of research into modern day competitiveness, where its focus is on the external context (Barreto, 2010; Endres, 2018).

The dynamic capabilities approach proposes that firms develop resources, which allow them to exploit 'existing internal and external firm-specific competences to address changing environments' (Teece et al., 1997: 510). Dynamic capabilities are rooted in the RBV approach to competitive strategy because its central notion is that firms develop management capabilities, as well as organizational, functional, and technological skills that are difficult for competitors to imitate. However, Teece et al. (1997) posit that the RBV is overly focused on the exploitation of existing assets and does not take into account the managerial strategies that are required to develop capabilities. These strategies in turn are crucial in order for firms to adequately manage their scarce resources and renew competencies in changing environments. Therefore, it is argued that a firm cannot sustain a competitive advantage merely through its assets, or positions, but that the advantage originates from a firm's managerial and organizational processes (Teece et al., 1997).

Teece et al.'s (1997) original article proposed that dynamic capabilities are made up of processes, positions, and paths. Managerial and organizational processes refer to the routines, patterns of practice, and the learning that occurs in firms. This includes the roles of coordination/integration, learning, and reconfiguration. Coordination/integration covers the activities of managers that involve the internal and external coordination and integration of tasks and technologies. Learning is the enabler of new opportunity identification because it involves the process of repetition and experimentation that lead to the development of the firm. Finally, reconfiguration refers to the necessary internal and external transformation that a firm must be able to execute by changing its asset structure to compete in a changed environment (Teece et al., 1997).

Positions then, are the specific assets of a firm, which can be internal, external, tangible, or intangible in nature. These include technological, structural, reputational, financial and market structure assets, amongst others. Paths include both the choices that the firm has

made, which have brought it to its current position, as well as the strategic choices it has going forward. The early dynamic capabilities framework posits that contrary to many other microeconomic perspectives, firms do not have the full repertoire of possible choices available to them, because they are constrained by their past choices, or investments. To conclude, this approach outlines that a firm's competitive advantage stems from its dynamic capabilities, which are a function of a firm's internal processes, shaped by its positions, and developed through its paths (Teece et al., 1997).

Following Teece et al.'s (1997) seminal article, the dynamic capabilities area has grown into its own independent body of research. However, this has also led to dynamic capabilities as a concept being defined and re-defined by so many, that some confusion and conflict remain in the use of the related terminology. Some research papers around dynamic capabilities treat them as firm-specific and unique capabilities, whereas others conceptually view them in terms of common best-practices across firms (Barreto, 2010). Gorgól (2017) argues that this disorderly use of terminology has led to the dynamic capabilities approach being plagued with issues of polarization, inconsistencies, and tautologies. Perhaps this is an issue that can be attributed to abstraction, where dynamic capabilities has become an all-encompassing term that is used to describe the finer intricacies of processes researched in many subfields of strategic management.

This is a perspective supported by Eisenhardt and Martin (2000) who have built on the dynamic capabilities theory by arguing that dynamic capabilities are indeed more descriptive of best-practices. In their view, dynamic capabilities is a circumferential umbrella term that combines several empirical research streams within management studies. This is because dynamic capabilities can lie in well-studied processes, such as product development, strategic decision making, and alliancing. The said processes in turn can be executed at different levels of effectiveness, which means that we will find commonalities in the processes of firms that execute them well. Research has indeed followed this path, which is why it makes dynamic capabilities an appropriate area of study in the context of strategic resilience. It is likely that these types of underlying capabilities result in variations in resilience performance during environmental jolts, but what exactly are the desired capabilities in this context is what needs to be researched more broadly.

Eisenhardt and Martin (2000), have reached the conclusion that the value of dynamic capabilities is in their resultant resource configurations instead of the capabilities themselves. Collis and Anand (2018) agree, stating that dynamic capabilities are valuable to firms, but they are not the ultimate source of a sustainable competitive advantage. This is because even though competitors may not be able to copy the capabilities exactly, there are many ways to substitute them and achieve the same outcome, hence why the real value lies in their outcomes and not the means to achieve them. On the other hand, it can be argued that this is true for any means that are used to achieve a sustained competitive advantage, which is why the key is to develop dynamic capabilities that fulfil the VRIN-properties.

Despite its intention to solve some of the weaknesses of the RBV theory, the dynamic capabilities framework is not without its critics. Williamson (1999) critiques the entire capabilities research field for its failure the operationalize its concepts, which appear vague, expansive, and elastic. According to him, this has led to a reliance on *ex post* rationalization, instead of concrete advice based on empirical evidence, which would help firms to decide when and how to reconfigure their capabilities. Since then, however, Teece (2007) has further developed the dynamic capabilities framework, disaggregating it into three clusters of dynamic capabilities, presented below in Figure 4.

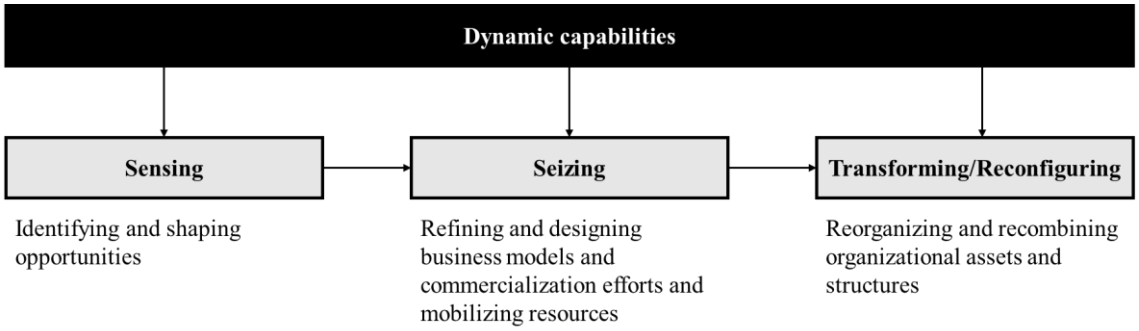

Figure 4 *Teece's (2007) dynamic capability clusters*

The first cluster, or class, of dynamic capabilities includes those capacities that a firm has for *sensing* and *shaping* opportunities and threats. In short, this is about scanning, creating, learning, and interpreting activities within the environment and then relating those to customer needs (Teece, 2007). In this way, firms can create projections of possible future paths that are available to them. Information and knowledge are in a key position within sensing capabilities. Teece (2007: 1322) cites two opportunity detection

factors by Kirzner (1973) and Schumpeter (1934), where the former has emphasized the fact that firms have different access to existing information, and the latter that new information and knowledge creates opportunities.

The second class of dynamic capabilities is *seizing*, which in effect is the ability of an organization to react to the sensed opportunities with new products, services, or processes (Teece, 2007). In practice, the organization must mobilize its resources and channel them into development and commercialization activities (Teece 2007; Teece et al., 2016). By nature, this capability is strongly related to investments, strategic choices, business model development and the psychology of decision-making. This is because once the organization has exercised its sensing capabilities and identified the potential paths available to it, it must decide which of these competing paths to pursue through its resources. This includes experimenting with innovations for different paths, developing a well-strategized business model around them, and then fully committing to the ones that looks most promising (Teece, 2007).

The third and final cluster of dynamic capabilities concerns enterprise *transformation* (or *reconfiguration*), which is the organization's ability to recombine and reorganize its assets and structures, so that the firm can transform from its current path to a new one. In essence, it is the organizational ability to change once an opportunity is sensed and seized. This view is based on the argument that organizations must balance efficiency with flexibility (Teece, 2007; Eisenhardt et al., 2010). Efficiency-seeking behaviour manifests itself in the adopted routines of an organization, but these routines must flexibly be changed as the environment shifts.

2.3.3 Environmental context

Originally, the dynamic capabilities approach by Teece et al. (1997) was developed specifically with rapidly changing environments in mind, especially those involving fast technological change. The later work by Teece (2007) specified that dynamic capabilities are relevant in environments with open international commerce, systemic technical change, well developed global markets, markets with poor technological and managerial knowledge, as well as environments that experience regulatory or institutional shocks (Barreto, 2010). However, there has been some disagreement amongst scholars about the relevance of the external market conditions for exercising dynamic capabilities.

Eisenhardt and Martin (2000) argue that dynamic capabilities take on different forms in different conditions; leveraging dynamic capabilities to enhance existing resource configurations for long-term advantage in dynamic markets, named the logic of leverage within RBV, and using dynamic capabilities to build new resource configurations of temporary advantage in high-velocity markets, named the logic of opportunity in the RBV. This suggests, that although sensing, seizing, and transforming are stable clusters of dynamic capabilities, the exact dynamic capabilities under each class differ depending on environmental conditions. This indicates that stable, turbulent, and high-velocity environments, as well as environmental jolts, all require different capabilities to create a competitive advantage. Zollo and Winter (2002) concur with this view and assume that dynamic capabilities are used in environments that have differing degrees of complexity and change. Similarly, Zahra et al. (2006) imply that a volatile environment is not a necessary condition of dynamic capabilities, indicating that they are useful in a stable environment too.

Since an environmental jolt is representative of the most volatile and complex operating environment, it is a wonder that dynamic capabilities have not been more widely studied in this context. This especially as some have strongly indicated that the value of dynamic capabilities is context dependent, with the highest value exhibited during an exogenous shock, because it is then that core operating capabilities become rigidities and the need for transformation is most crucial (Helfat et al., 2007; Newey & Zahra, 2009).

Makkonen et al. (2014) have studied dynamic capabilities in the context of the 2008 financial crisis and confirmed what is apparent in the literature on strategic resilience, that the better an organization's fit with its external environment, the better its performance. Their research confirms that indeed, the relationship between the operating environment and dynamic capabilities is context-dependent, and that dynamic capabilities give firms a competitive advantage in the context of an exogenous shock. However, the conceptual model used in their study categorizes six dynamic capability classes into two categories, regenerative capabilities, and renewing capabilities, which are even higher-level dimensions than Teece's (2007) sensing, seizing, and reconfiguring. To these, Makkonen et al. (2014) add three learning and knowledge related capability classes. Nonetheless, this study has not focused on identifying dynamic capabilities on a more specific level,

but instead focused on proving a correlation between dynamic capabilities and firm performance in an environmental jolt.

With the focus on identifying the specific capabilities, Mansour et al. (2019) have studied how tourism organizations have dealt with surviving in the crisis of the Libyan civil war. They found that the dynamic capabilities exhibited in these circumstances were cognitive crisis assessment capabilities and behavioural crisis response capabilities. They believe that these allowed the tourism organizations to both adapt and create new business activities during the environmental jolt. However, the sample of firms chosen for the study had reacted defensively to the environmental conditions, and as such it is likely that these dynamic capabilities are more strongly associated with operational resilience rather than strategic resilience (Mansour et al., 2019).

Conversely, Alonso-Almeida et al. (2015) studied the strategies of restaurants during the financial crisis from the perspective of reactive and proactive strategies. They indeed found that the proactive strategies developed dynamic capabilities, which in turn contributed to the formation of a competitive advantage. Nonetheless, there is a failure to demonstrate that proactive strategies give rise to dynamic capabilities, rather than vice versa. In fact, Archibugi et al. (2013) have found that the most innovative companies during the financial crisis had dynamic capabilities, which enabled them to develop proactive strategies. Rationally, it is most likely that dynamic capabilities are formed and strengthened out of experience and developed incrementally, hence there is a positive feedback loop, which leads to confusion about causality. Certainly, the work of Alonso-Almeida et al. (2015) implies that dynamic capabilities contribute to the creation of a competitive advantage during an environmental jolt, and that they also lead to further development of existing capabilities or the creation of novel ones. Again, the research did not specify what those capabilities are, but indicates that they are ones which keep the firm focused on its core customer processes and the seeking of new commercial opportunities (Alonso-Almeida et al., 2015).

Evidently, the research into dynamic capabilities in the context of an environmental jolt is in its infancy, but it has been repeatedly demonstrated that there is a positive relationship between dynamic capabilities and the development of a competitive advantage in this context. This area of research also suffers from various definitions of what dynamic capabilities are and has failed to name the specific capabilities that are

most valuable in the said circumstances. Barreto (2010: 271) has reviewed and synthesized past literature on dynamic capabilities in general and proposed the following definition:

> *A dynamic capability is the firm's potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and to change its resource base*.

This definition will be adopted in this research, as it is applicable to various environmental contexts, unlike some earlier definitions, but also one that broadly covers the essence of prior definitions. The definition refers to the systemic nature of dynamic capabilities, but because of the low frequency of environmental jolts, systemics may be difficult to observe in this context. This leads one to wonder if all actions or reactions that take place during an environmental jolt and result in a positive outcome, are the result of dynamic capabilities?

2.3.4 Ad-hoc problem solving

Winter (2003) proposes they are not. He characterizes dynamic capabilities in a hierarchical manner, making a distinction between dynamic capabilities and what is termed *ad-hoc problem solving*.

Collis (1994) first suggested that capabilities are hierarchical in nature, which means that a capability that is currently the source of a competitive advantage for a firm, is not sustainable, as it may always be surpassed by a higher-order capability. It follows, that there is an issue of infinite regress, where there is no logical end to the source of a superior capability. For example, the ability to innovate in a turbulent market environment may be superseded by the ability to create processes to innovate in the same context, which in turn is inferior to the ability to innovate processes that create those processes that result in those innovations (Collis, 1994).

Winter (2003) went further to define those hierarchies, where so-called zero-level capabilities are ones that allow a firm to make a living and to exist. In contrast, first order dynamic capabilities are ones that allow a firm to evolve, through product development for instance. Not only that, but the more important argument is that change can originate in many ways, not just through capabilities (Winter, 2003). Both Collis (1994) and Winter

(2003), as well as many other researchers in the field (Zollo & Winter, 2002; Wang & Ahmed, 2007; Zhou & Wu, 2010), have defined capabilities as residing in a firm's routine activities, much like the systemic nature referred to in the definition adopted in this paper. This has led much of the literature to ignore spontaneous change that does not originate from any learned organizational behaviour. Winter (2003) suggests that creative improvisation in strategy making may even at times be more economically advantageous than the development of dynamic capabilities, which requires time, financial commitment, and specialized resources.

As change is often exogenous and unpredictable, particularly in an environmental jolt, all firms are forced to react. Some may react through their built capabilities, but others may be forced into what Winter (2003) characterizes as, 'a high-paced, contingent, opportunistic and perhaps creative search for satisfactory alternative behaviors' (p. 992). In other words, these are not routine or repetitive behaviours rooted in organizational capabilities, but rather reactive or passive actions that are termed ad-hoc problem solving. Thus, a firm can change through ad hoc problem solving (Winter, 2003) or by exercising its dynamic capabilities (Eisenhardt & Martin, 2000).

In the context of strategic resilience in an environmental jolt, the concept of hierarchical capabilities is sensible, as lower order capabilities may result in operational resilience, while higher order dynamic capabilities are needed to form strategic resilience. Although ad-hoc problem solving may in theory achieve the same result, it is quite difficult to believe that a firm can haphazardly improvise and create a very competitive response out of thin air in a crisis-like situation. Instead, it is more reasonable to hypothesize that iterative learning and strong lower-level capabilities lead to a first-time competitive response that may initially resemble ad-hoc problem solving. Yet if adequate learning mechanisms are in place, the firm will use this prior experience to develop novel dynamic capabilities.

Certainly, it appears that the main differentiators between a dynamic capability and ad-hoc problem solving, are that dynamic capabilities have some structure and that they are based on organizational learning. Ad-hoc problem solving on the contrary is an unstructured effort to improvise without incorporating learning mechanisms. The lack of learning and structure in ad-hoc problem solving would likely lead to major success or failure, where the uncoordinated effort would be hard to dissemble into broader strategic

implications. According to Stikin (1992) cited in Eisenhardt and Martin (2000), it is the small failures that contribute more effectively to learning, rather than major failures or successes, because a major failure raises psychological defences that inhibit learning, whereas small failures motivate individuals to learn without defensiveness and pay attention to detail.

Because of the simple, experimental, and iterative processes that characterize dynamic capabilities during volatile market conditions, they are also dissipative and unstable, requiring the constant attention and energy of management so that these processes do not slip into chaos, i.e. an ad-hoc problem solving mode (Eisenhardt & Martin, 2000; Prigogine & Stengers, 1984 cited in Eisenhardt & Martin, 2000: 1113).

2.3.5 Microfoundations

As explained before, dynamic capabilities can be classified under three classes of capabilities: sensing, seizing, and transforming. Under these classes, lie the dynamic capabilities that are both context and application specific, that is there are different dynamic capabilities for different environmental conditions and organizational domains. Different dynamic capabilities are in play for product development in a moderately turbulent environment, than for supply chain management in a stable environment. However, dynamic capabilities should be identifiable routines, processes, and characteristics, which can be specifically named as resulting in the outcome of a competitive advantage. This then begs the question of what gives rise to these dynamic capabilities and how can they be practically created within organizations?

The answer to this lies in the microfoundations of dynamic capabilities, which are their causal underpinnings or origins. Felin et al. (2012: 1353) define that microfoundations are:

> *constituent components (i.e. main effects) – individuals, processes, and structure; and interactions within and across components (i.e. interaction effects) – the interactions of individuals, processes and structures that contribute to the aggregation and emergence of the collective constructs.*

Therefore, microfoundations are the lower-level inputs that interact together to give rise to dynamic capabilities. To truly generate a sustained competitive advantage, we should

recall that firms must develop dynamic capabilities that fulfil the VRIN-attributes. Assuming that dynamic capabilities can serve as a source of sustained competitive advantage, means to also assume that their microfoundations are a firm-specific black-box, which creates valuable, rare, inimitable, and nonsubstitutable dynamic capabilities. For if we could point to the exact recipes of components that give rise to dynamic capabilities, they would no longer be the source of a sustained competitive advantage, but instead resemble best practice routines. Consequently, research may focus on identifying dynamic capabilities that are uniform across competitive firms but should not be able to point to general principles in how they are created. If this happens, then higher order capabilities are needed for a competitive advantage to be regenerated. In spite of this, there has been an effort to identify what microfoundational components are at play that give rise to dynamic capabilities, for then we can study individual firms to learn how they, exclusively, were able to create the necessary dynamic capabilities to reach a sustained competitive advantage.

Felin et al. (2012) have divided the microfoundations of firm routines and dynamic capabilities into three types: individuals, processes and interactions, and structure. All of these categories interact with each other and within each other, adding a layer of complexity and resulting in a set of output effects that give rise to routines and capabilities. The microfoundations and their relation to dynamic capabilities and dynamic capability classes are presented in Figure 5. Here, exemplary dynamic capabilities have been used for conceptualization.

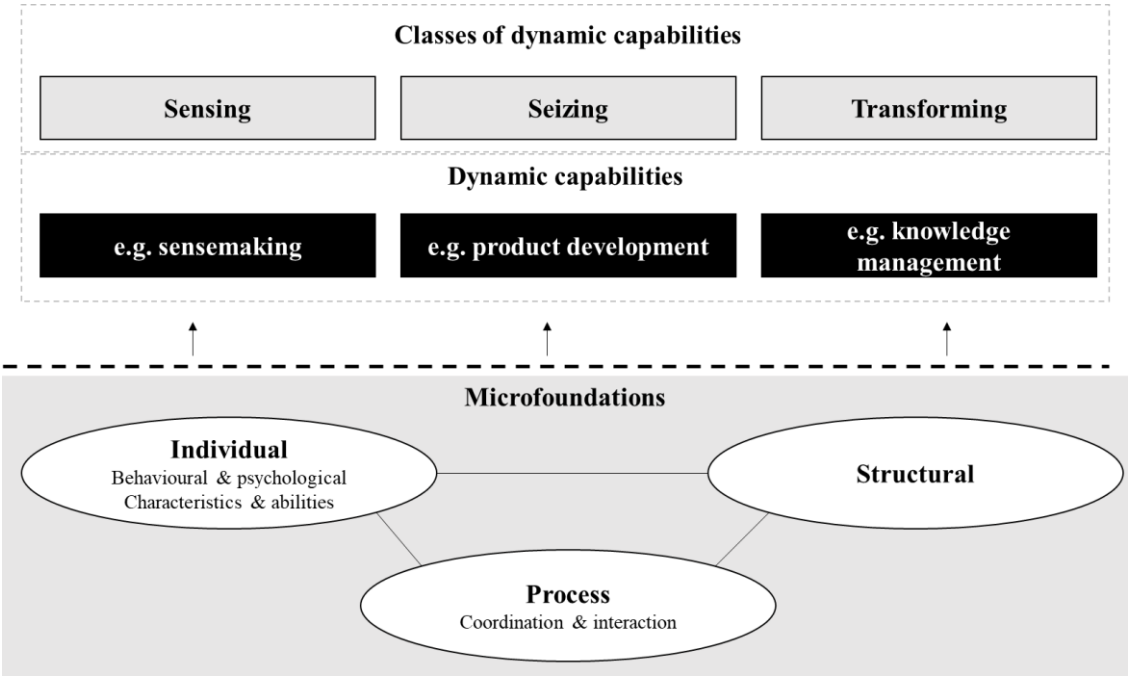

Figure 5 *The relationship between dynamic capability clusters, dynamic capabilities, and their microfoundations.* (Teece, 2007; Felin et al., 2012)

Structural microfoundations

Structural microfoundations are those structures, which 'enable and constrain individual and collective action and establish the context for interactions within an organization' (Felin et al., 2012: 1364). As such, structures create boundaries for actions, they are significant for decision-making processes, knowledge sharing, coordinating activities and any type of collective action, for they determine the rules of conduct and guide activities within an organization. On the one hand, we know that a very rigid structure, such as one that is prevalent in a military setting, leads to a highly efficient execution of routines. On the other hand, flexibility allows for more improvisation and as such can result in more creative outcomes.

Organizational structure impacts the performance of the entire organization and is very difficult to optimise, which is why it has been studied extensively in management literature. For instance, Harrison and Rouse (2014) have studied the role of autonomy and constraints in group work that generates creativity and found that there is a delicate and ongoing dynamic balance between the two. They explain that when teams are faced with unexpected events, there is a need to improvise, yet at the same time a need to coordinate existing resources. With too many structural constraints, improvisation and creativity is stifled, while too much autonomy leads to an uncoordinated response. Barrett (1998) draws comparison between organizational learning and design, and jazz improvisation.

He explains that an improvisatory mindset is especially important in turbulent and volatile environments, and that organizations could draw lessons from jazz improvisation to be able to interpret vague cues, face unstructured tasks, process incomplete knowledge, and then take coordinated action.

On the other hand, organizational structure also determines the balance between exploration and exploitation within a firm. O'Reilly III and Tushman (2004) demonstrated that the structure of an organization in the context of breakthrough innovation projects was a significant determinant of success, finding that those with ambidextrous functional designs were more successful in achieving their goals. This naturally has implications for dynamic seizing capabilities. At the same time, the organizational structure, and the resultant boundaries in relation to its environment also matter. Lifshitz-Assaf (2017) found that the dismantling of knowledge boundaries in the form of adopting an open innovation model at NASA led to major breakthroughs in R&D work, pointing to an improvement in dynamic sensing capabilities. However, it was also found that positive effects in knowledge-work only took place when these structural changes were coupled with the true adoption of a new identity in part of the R&D professionals. This is a clear indicator of the complementary nature of organizational microfoundations, in this case individual and structural, which lead to the development of dynamic capabilities.

Research has also identified structures as one influencing factor in individual and organizational learning, in addition to trust, culture, leadership, strategy, and the environment (Fiol & Lyles, 1985; Martínez-León & Martínez-García, 2011). Structural microfoundations have a significant impact on learning because they can enable or inhibit the efficient processing and flow of information, as well as knowledge development and sharing (Felin et al., 2012). Organizational learning in turn, is important in the context of dynamic capabilities, because in order for a firm to transform, it must unlearn past behaviours and learn, or re-learn, new ones that are aligned with its environmental conditions (Fiol & Lyles, 1985). Organizational learning ultimately results in knowledge, which is an intangible asset for the firm and can become very valuable in terms of creating dynamic capabilities with VRIN-properties, because it is both context-sensitive and history-dependent (Martínez-León & Martínez-García, 2011).

Martínez-León & Martínez-García (2011) explain that organic structures are better suited for learning than mechanistic ones, because they facilitate the crossing of organizational levels and boundaries, which means that knowledge and expertise is distributed more efficiently and widely amongst different organizational groups. This means that organic and decentralized structures are better positioned to deal with unusual changes, complex tasks, and frequent changes, whereas bureaucratic structures support reactive behaviours to routine problems (Vivas & Peris, 2004 cited in Martínez-León & Martínez-García, 2011: 545; Lam & Lundvall, 2006). Moreover, Hankinson (1999) links organizational structure to many more aspects of the organization, claiming that the decentralization of power and control leads to more proactive employee participation, organizational management, and an open, trust-based culture. Contrarily, hierarchy leads to information filtering and the need for continuous management intervention in decision-making and problem solving (Ahmed, 1998; Hankinson, 1999).

Process microfoundations

As with learning, Teece (2014) names processes as a potential source of dynamic capabilities, that can create a competitive advantage. This is because processes and routines are intertwined and firms tend to develop signature processes, which are the result of the company's past actions, investments, and learning. This makes signature processes firm-specific intangible assets, which together with underlying knowledge interact to potentially create dynamic capabilities with VRIN-attributes. An example of such a process would be Toyota's lean manufacturing model.

While Teece (2014) clearly highlights that processes are one way of reaching a competitive advantage as Toyota did, Eisenhardt and Martin (2000) go so far as to say that dynamic capabilities as a whole consist of specific processes that are used to create value by manipulating a firm's resources. This however ignores the importance of other firm-specific elements and their interactions, and whilst everything with an input and an output can be described as an individual process, this is not very productive when the goal is to find the more general contributors to the formation of dynamic capabilities. Certainly however, strong processes in strategic decision-making or product development for example, can be the source of competitive advantage, but they are often formed through the interaction and coordination of individuals, flow of knowledge, structures, and the likes.

Felin et al. (2012) argue that routines stem from processes, because both are alike in that they consist of interdependent sequenced events. However, they say that some routines are more strictly grounded in processes than others, where more flexible processes allow for the better natural evolution of organizational routines. In contrast, Eisenhardt and Martin (2000) have asserted that routines are processes themselves, but ones that are more stable and have predictable outcomes, which makes them well suited for less turbulent environments. However, in high-velocity markets, they claim that the processes needed are characterized by their experiential and fragile nature, and unpredictable outcomes, which in fact makes them distinct from routines. This would suggest that only those processes, which have been adopted by an organization for frequent or long-term use, with known benefits, become routines. Moreover, the nature of the processes that become routines differs significantly from those that cause them to change. It would then make sense, that organizational routines are suitable for an environment that is in a state of equilibrium but may not be a necessary component of dynamic capabilities in temporary environmental turbulence, where situation-specific processes are more important. This supports the view that the microfoundations of dynamic capabilities, and the capabilities themselves, are different depending on the environmental context.

Processes always require the input and coordination of individuals and resources, which is what makes process-based microfoundations of dynamic capabilities complex to map and comprehend (Felin et al., 2012). Teece et al. (2016) also note that while routines and processes are important elements of dynamic capabilities, they are slow to change, hence why an ability to think creatively and override those routines is necessary for the development of dynamic capabilities. This then shifts focus away from the ad-hoc processes that create change within an organization, to the individual creative and management capacities that reside within a firm.

Individual microfoundations

Organizations are ultimately formed by collections of individuals, who work toward a common goal. Teece (2012: 1396) has brought forth that dynamic capabilities may even be based on the skills and knowledge of a few key individuals within firms and argues that all firms need ‘entrepreneurial capitalism’ to reach and sustain superior performance. This he hypothesizes, is even more crucial to dynamic capabilities than are routines, which are more firmly rooted in a firm’s ordinary capabilities. Felin et al. (2012) agree

by elaborating that individual choices, characteristics, abilities, and cognition form the very basis of our understanding of routines and capabilities. They recount that individuals make choices that can be more or less rational and informed, and that people bring in human capital in the form of skills, knowledge, experience, and cognitive capacities, which shape organizations as a whole. Furthermore, these dimensions interact between individuals to give rise to collective phenomena. This microfoundation therefore, is closely associated with the field of behavioural psychology.

Fallon-Byrne & Harney (2017) point out that much of the discussion around dynamic capabilities has been overly focused on managers and leaders, but that it should be examined from the perspective of all individuals within a firm on a collective level. This is because they assert that dynamic capabilities revolve around human behaviour and motivations, which interact together with routines and cause changes in collective behaviours. This is a perspective shared by Hodgkinson and Healey (2011), who argue that sensing, seizing, and transforming capabilities require firms to harness the individual and collective cognitive and emotional capabilities within the firm. This is because cognitive, affective, and behavioural processes are just as significant as any other organizational process, if not more so, as they underpin all others.

Hamel (2007) has constructed a pyramid of human capabilities, which consists of six dimensions pertaining to the features and values of individuals. The first three of these, obedience, diligence, and intellect, are capabilities that an organization can buy to achieve mediocre performance. The last three, initiative, creativity, and passion, are those that have to be developed in individuals, and are crucial for a sustainable competitive advantage. At the same time, these are difficult to develop and manage, and as such an organization needs the management, structures, culture, and interpersonal interactions that facilitate their development (Sivusuo et al., 2018).

Rice (2006) has studied the link between an individual's values and employee creativity in the organizational context. Specifically, they have found that individuals with particularly strong self-direction value type are more prone toward creative behaviours than those that tend toward conformity and power. This indicates that creativity originates out of the higher-level human capabilities that Hamel (2007) suggests, implying that it is a characteristic that is more difficult to foster. Indeed, management research has been more concerned with exploring what gives rise to creativity rather than obedience.

However, it is also stressed by Rice (2006) that the contextual factors promoted on an organizational level were more important for eliciting creative behaviour than were the values of individuals. Here, it is the meaning of work and social interaction that influence creative behaviour, indicating that perhaps firm-level values play a more important role. Certainly, it was confirmed in this study that an organization that is open, fun, trusting, and caring has a positive effect on creative behaviour, which in turn is important for sensing, seizing, and transforming capacities (Rice, 2006).

From the perspective of innovation more generally, it has been found that employee empowerment through involvement and communication, as well as positive social interactions, and learning opportunities, have been linked to better organizational outcomes. In a framework proposed by Fallon-Byrne & Harney (2017), employee empowerment leads individuals to search for opportunities and encourages customer focus, which boosts a firm's sensing capabilities. Relational capital in turn has the behavioural outcome of creative problem solving and acceptance of new ideas, strengthening a firm's seizing capabilities. Last, learning opportunities encourage risk taking and quick responses, that support transforming capabilities. Collectively then, these result in new product, service, and process innovations (Fallon-Byrne & Harney, 2017).

The psychological microfoundations can be dissected to cover both cognitive processes and emotional dynamics, although management literature has long been polarized toward the discussion of the rational cognitive elements. Hodgkinson and Healey (2011) stress this, by explaining that Teece (2007) has discussed the subject from the popular perspective of viewing human cognition as being comprised of two different information processing systems. System 1 handles the automatic and fairly effortless processing of information, whereas System 2 allocates attention to the conscious and effortful mental activities (Kahneman, 2011). Hodgkinson and Healey (2011) have used the more descriptive terminology of reflexive system for the former and reflective system for the latter. However, the focus on dual-system cognition is a very rational perspective of the psychological processes underpinning dynamic capabilities, and not in line with recent research, which presents strong evidence that sensing, seizing, and transforming capabilities also have emotional roots (Hodgkinson & Healey, 2011). In fact Healey and

Hodgkinson (2017: 117) contend that 'a considerable volume of evidence shows that the highest quality decisions emerge when reason and emotion work together.'

This is certainly difficult to refute, as even common sense says that emotions have a bearing on all other aspects of our lives and need to be managed and controlled, hence why there is no reason to suspect that the case is any different in the process of strategizing. Therefore, cognition on an individual and collective level is important, especially when it comes to organizational decision-making, but it is the affective dimension that is even more omnipresent within an organization.

2.3.6 Role of emotions

For the most part, emotions manifest themselves in the individual psychological microfoundations, which in turn are affected by their interactions between structures, processes, and other individuals, to also form collective emotional constructs. They are important, because they give rise to different behaviours, encouraging or stifling desired traits that build dynamic capabilities. Furthermore, emotions affect how environmental events are perceived and how rational organizational decision-making is. Barrett and Russell (1998) created a model for emotions and mood by splitting them up into four quadrants along two dimensions: positive-negative and activation-deactivation. Since then, Healey and Hodgkinson (2017) have adapted this circumplex model of affect by describing the activation-deactivation dimension in terms of high energy and low energy, as depicted in Figure 6 below.

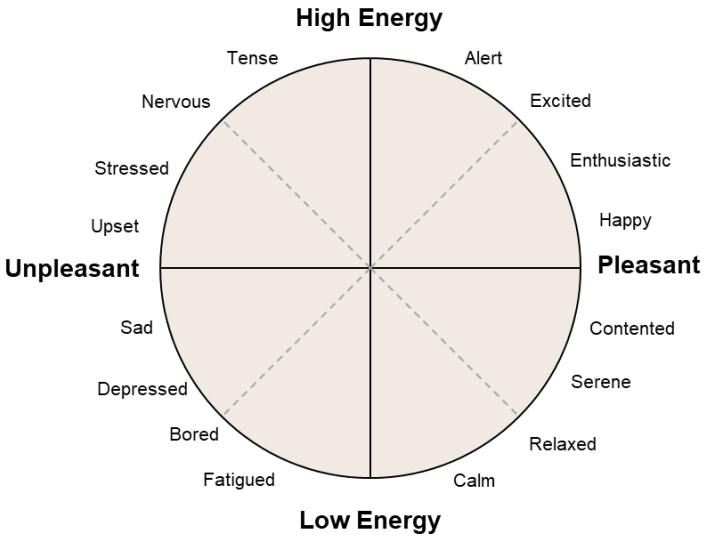

Figure 6 *The circumplex model of affect* (Healey & Hodgkinson, 2017)

Healey and Hodgkinson (2017) have used the circumplex model of affect to describe how dynamic capabilities are influenced by emotions, and that the same emotions present potential benefits and risks to strategic adaptation. Generally speaking, they theorize that the discrete emotions of the upper left- and right-hand quadrants are associated with active information processing, in contrast to the lower quadrants, which evoke withdrawal and low engagement. It is argued that emotional regulation is an important microfoundation of dynamic capabilities because emotions need to be controlled to prevent them from overwhelming reasoning, but at the same time they need to be recognized as sources of important information and motivation. Here it is distinguished that emotional down-regulation achieves the former, while emotional up-regulation the latter (Healey & Hodgkinson, 2017).

For example, with sensing capabilities, the positive high-energy emotions of the upper right-hand quadrant lead to the generation of creative and novel solutions, but also run the risk of giving rise to over-optimism and confirmation bias. Similarly, unpleasant emotions help with detailed scanning of threats in the environment, as well as criticality toward novel ideas, but run risk of threat bias and hypercriticality. To manage these emotional risks, firms should down-regulate anxiety, causing the firm to adopt a realistic perception of threats and opportunities and mitigating a possible ostrich-effect (Karlsson et al., 2009). At the same time, they should up-regulate enthusiasm for novelty to encourage creativity and opportunity identification. One management tool for achieving this is emotional reappraisal, where issues are reframed to alter their emotional impacts (Healey & Hodgkinson, 2017).

Similarly, emotions should be managed relative to seizing capabilities by up-regulating negative emotions associated with the firm's current state and up-regulating enthusiasm and excitement for novel alternatives (Healey & Hodgkinson, 2017). For transforming capabilities in turn, the key is to down-regulate anxiety that is related to threats to identity, and to up-regulate positive self-worth (Healey & Hodgkinson, 2017). However, for emotions to be effectively regulated and managed in this manner, organizational leadership must also have good situational awareness of the emotional state of the firm. This is a separate capability, which Sanchez-Burks & Huy (2009: 22) have termed *emotional aperture*, 'the ability to recognize the composition of diverse emotions in a collective.'

Sanchez-Burks and Huy (2009) argue that collective emotions are important during strategic change in organizations, because they influence the way that different organizational groups think and behave. The emotions of individuals converge into collective emotions, which can take place on a team level or an organizational level. Emotional aperture includes being able to identify patterns of shared emotions, i.e., if they are positive or negative, as well as specific emotions, such as anger, excitement, or surprise. Being able to accurately identify collective emotions means that managers can use them as predictors of behaviour. For example, to recognize that fear leads to risk-averse behaviours, or that the positive emotions of one group can be used to try and generate those same emotions in another group that may experience the same thing negatively. Moreover, recognizing emotional cues gives management important information about peoples' opinions and preferences, which is important when it comes to implementing organizational change (Sanchez-Burks & Huy, 2009).

Collective emotions arise out of shared interpretations, identities, and organizational culture (Van Maanen & Kunda, 1989; Mackie et al., 2000; Schein, 2017). For instance, it has been found that when employees strongly identify themselves with their organization, then they typically also have a strong affective experience when the identity of that organization is threatened or enhanced (Dutton & Dukerich, 1991). It is also true that emotions are contagious and as such create clusters of shared emotions in organizational settings (Barsade, 2002). According to Barsade and O'Neill (2016) this should be leveraged so that negative emotions are channelled, and positive emotions cultivated.

As has been touched upon before, the culture of a firm plays an important role in multiple areas of the microfoundations of dynamic capabilities. Schein (1983: 14) has defined organizational culture as, 'the pattern of basic assumptions that a given group has invented, discovered, or developed in learning to cope with its problems of external adaptation and internal integration.' Even from the definition of culture, its close link with external adaptation draws a direct bridge to dynamic capabilities. With affective microfoundations too, the emotional culture of a firm is in a key position in shaping the sensing, seizing, and transforming capabilities within a firm.

Emotional culture

Emotional culture manifests itself in non-verbal cues, through body language, facial expressions, and the likes, as well as cultural artifacts and rituals, and the organization's values, in terms of what it feels like to be part of a workplace culture (Barsade & O'Neill, 2014; Men & Robinson, 2018). Schein (1983) has expressed that the founders of an organization have a significant impact on how culture develops within an organization and has put forth several factors that may in fact give rise to a more favourable emotional culture. First, it is suggested that founders tend to focus on building communities in which employees know each other well on a personal level, and thus develop a deeper sense of trust, which is an important element that will be discussed later. Second, the values of the founders will be closely tied to the identity of the firm and will be staunchly defended against new members who do not fit with the value system. Therefore, the impact of founders on the emotional culture of a firm is even stronger than that of top management more generally, despite the fact that both types of leaders set the tone within the organization (Schein, 1983; Barsade & O'Neill, 2016).

Emotional cultures are often discussed in terms of four types: joy, companionate love, fear, and sadness (Barsade & O'Neill, 2016; Men & Robinson, 2018). Barsade and O'Neill (2016) point out that past studies have repeatedly demonstrated that emotions have an effect on how people perform, how creative and engaged they are, how they commit to their organizations, and how decisions are made, with positive emotions leading to positive outcomes and negative emotions to negative outcomes. For instance, it has been shown that a culture of companionate love, i.e., the feelings of affection, compassion, caring, and tenderness for others, has a positive effect on employee satisfaction and teamwork, whilst it negatively impacts emotional exhaustion (Barsade & O'Neill, 2014). Therefore, Barsade and O'Neill (2016) argued that firms need to pay attention to their emotional culture and deliberately work on shaping it. They emphasize that this can be done simply through small things to cultivate an emotional culture and paying attention to what emotions are cultivated by leadership (Barsade & O'Neill, 2016).

Psychological safety

An important aspect of a firm's emotional culture in relation to dynamic capabilities, is psychological safety. Nembhard and Edmondson (2011) discuss that a psychologically safe environment is a key position for enabling organizational learning, because it lays

the foundation for speaking up, collaborating, and experimentation, which are consistently associated with team learning. Psychological safety consists of the beliefs that people have in how others will respond when one takes a risk by proposing a new idea, reporting a mistake, or asking a question (Edmondson, 1999).

When employees speak up, it is a way to source ideas from throughout the organization, bring problems to the fore, and gain diverse perspectives for decision-making. Furthermore, being active in sharing information and ideas is important for collaborative work. Ge (2020) found that psychological safety encourages an employee to voice themselves, which in turn promotes their engagement with the workplace. Kark and Carmeli (2009) found that psychological safety led to a feeling of virality, which in turn results in creative work. However, speaking up or experimenting with new things is always about taking an interpersonal risk, which is taken or not depending on the perceptions of the consequences for doing so (Costa Pacheco et al., 2015). It has been shown across research, that psychological safety minimizes those perceived risks, and thus encourages learning behaviours (Nembhard & Edmondson, 2011).

For a workplace to be psychologically safe, people need to know that they can express themselves without fear of rejection, punishment, or embarrassment (Edmondson, 1999). Furthermore, experimentation and improvisation can occur when there is support for risk-taking and a tolerance for failure (Nembhard & Edmondson, 2011). Edmondson (2004) discusses that a psychologically safe environment does not mean one where everyone are close friends, but rather than the climate is such that discussions are productive, goal oriented, and focus on preventing problems.

It has been found, that when individuals are part of a bounded group, where they form stable and long-term relationships, then it allows for the development of rapport, understand, and appreciation, which cultivate psychological safety. Furthermore, workgroup dynamics in terms of status and power differences have implications for psychological safety, because those lower in hierarchy often feel less safe to take an interpersonal risk as that risk is higher. Therefore, a hierarchy based on status and power, as well as a temporary and virtual team negatively influence the development of psychological safety (Nembhard & Edmondson, 2011).

On the other hand, having organizational goals that are learning-oriented as opposed to performance-oriented, builds psychological safety (Nembhard & Edmondson, 2011). This is because a performance-oriented organization implies that employees should be focused on delivering high-performance by showing successes and avoiding failures (Ames & Archer, 1998). This in turn means that deviating and taking a risk by experimenting, which may result in failure but learning, is not a desirable trait. Another aspect that builds psychological safety is leader inclusiveness, that is that a leader seeks and appreciates the input of others, make themselves available and display fallibility (Nembhard & Edmondson, 2006).

Trust, relationships, and engagement

Edmondson (2004) distinguishes psychological safety from interpersonal trust, explaining that they are complementary but distinct constructs that relate to interpersonal beliefs. First, with trust the focus is on *others*, evaluating whether they are trustworthy, whereas with psychological safety, the focus is on *oneself* and the consequences of own actions. Second, trust tends to be considered in long-term, where anticipated consequences are evaluated over a longer time span than is the case with psychological safety, where immediate consequences are evaluated over long-term impact of not speaking up for example. Last, it is proposed that psychological safety is a group-level experience, whereas trust is typically between two entities, whether they be individuals or firms (Edmondson, 2004).

However, trust contributes toward developing high-quality relationships, which in turn is argued to underpin psychological safety (Kahn, 1990; Carmeli & Gittell, 2009). Additionally, McAllister (1995) has explained that trust is important for effective coordination within organizations and has put forth that there is both *cognition-based trust* and *affect-based trust*. Cognition-based trust stems from an individual evaluating evidence about whether someone is trustworthy or not. There can be total knowledge, which is when there is no need for trust, or there can be total ignorance, thus there are no basis on which to rationally build trust. Affective foundations for trust stem from the genuine care and concern for the other party and rely on the emotional bonds between individuals. It was found that some level of cognition-based trust was needed for affect-based trust to develop, at least when it came to relations between managers and peers. Affect-based trust was found to develop from the frequency of interaction, as well as

citizenship behaviour, which is when an individual helps in a manner that is not within their work role, not directly rewarded, and conducive to the effective organizational functioning. Therefore, the emotional component to trust is also a significant factor in improving the performance of individuals within a firm (McAllister, 1995).

Gittel (2003) has theorized that there are three types of high-quality relationships – shared goals, shared knowledge, and mutual respect. These types of relationships can connect individuals who have their distinct but interdependent roles, in such a way that the organization's information processing capacity is improved because of positive effects on coordination. If people have competing goals and a lack of mutual respect, then a lack of understanding persists between them, and blaming each other for failures is more likely. On the contrary, a shared goal that surpasses specific roles, a connection through shared knowledge of processes and the interrelation of roles, as well as mutual respect, lead to an atmosphere of openness where it is less likely that people blame each other for mistakes (Carmeli & Gittell, 2009).

Psychological safety has also been positively linked to engagement, which no doubt contributes toward passion, if we recall Hamel's (2007) individual capabilities. May et al. (2004) have also identified meaningfulness and availability as key characteristics to creating engagement. Of the three elements, meaningfulness had the strongest positive relation of the three, and is borne out of job enrichment and work role fit. Engagement in a workplace is important because it is where people can express themselves in their roles physically, cognitively, and emotionally (Kahn, 1990). Furthermore, meaninglessness gives rise to apathy and detachment from work, which will no doubt lead to the manifestation of low-energy negative emotions (Thomas & Velthouse, 1990).

By now, it should be clear that emotions have wide-spanning effects that ripple throughout the organization and can either inhibit or help the development and execution of dynamic capabilities. It is clear, that as a firm faces higher emotional strain within its environment, its routines in emotional management must also adapt and the affective implications of environmental events need to be decisively addressed.

2.3.7 Synthesis with strategic resilience

As discussed, the dynamic capabilities approach has been used to explain the heterogenous performance of firms in competitive environments, but there is a lack of

literature within the context of an environmental jolt. Yet, this is an important research area, because dynamic capabilities could explain why some firms are able to act in a strategically resilient, and thus competitive manner, whilst others do not reach that capacity. It is highly likely, that dynamic capabilities are the source of strategic resilience, which is a mediator to a competitive advantage in an environmental jolt. The relationship between the concepts is given below in Figure 7.

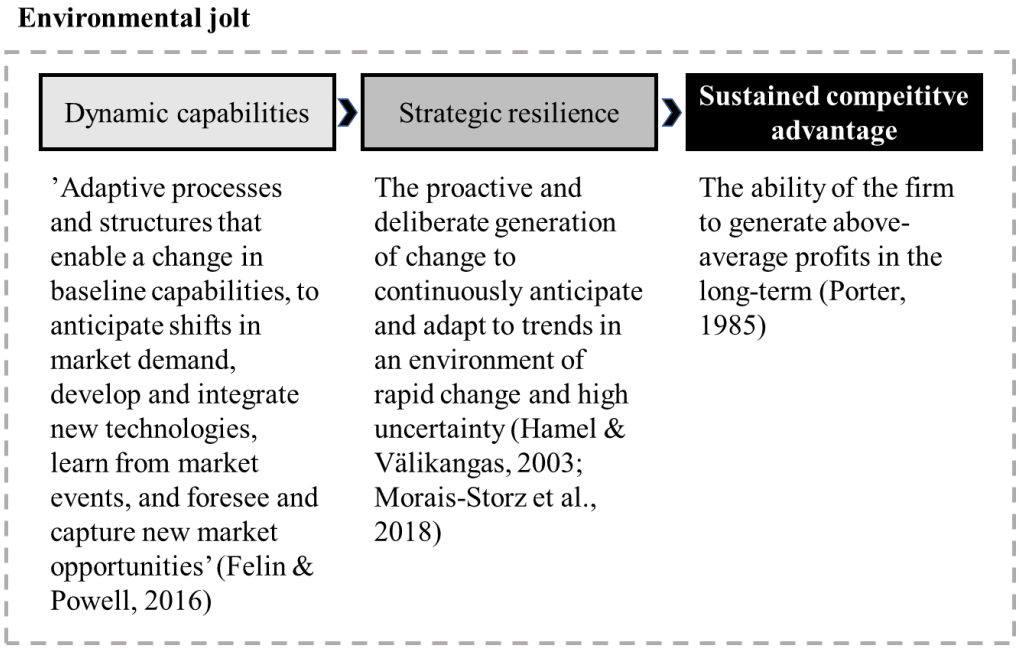

***Figure** 7 Antecedents of a sustained competitive advantage in an environmental jolt*

Bhamra et al. (2011) have conducted a literature review of resilience literature and found that there were 52 studies with relation to behaviour and dynamics, 14 on performance, and just 17 in relation to strategy and capabilities. These can further be divided into three different streams of resilience literature: readiness and preparedness, response and adaptation, and recovery or adjustment (Bhamra et al., 2011). Clearly, this demonstrates the scattered nature of the literature in this area, with the capabilities perspective being under-researched.

One major area where the literature on strategic resilience and dynamic capabilities converge, is that of organizational adaptation. Winnard et al. (2014) have named adaptive capacity as something that differentiates strategically resilient organizations from others, elaborating that businesses should take a proactive stance to managing their adaptive capacities. They name processes through which adaptive capacity can be deployed but fail to explain exactly how these processes are built and conducted, yet they do pay

reference to the capability to learn and adapt more generally. Similarly, Bhamra et al. (2011) have reasoned that adaptive capacity leads to a more proactive experience with environmental events, and links it with organizational learning and quick reconfiguration, which are both elements of the dynamic capabilities framework.

Indeed, some studies have been conducted, where adaptation and dynamic capabilities in crisis situations have been investigated. Makkonen et al.'s (2014) study on dynamic capabilities during the financial crisis, finding that an organization can adapt to its external environment through its resources and capabilities, which is in line with the RBV and dynamic capabilities approach. Mansour et al. (2019) instead, found that those firms that were successful in a crisis, developed adaptive capabilities, which in turn allowed them to survive. The same was found by Alonso-Almeida et al. (2015), who claim that only proactive strategies develop dynamic capabilities for competitive advantage. Likewise, Zúñiga-Vicente and Vicente-Lorente (2006) found that the adaptation view to strategy, including dynamic capabilities, significantly improved the survival prospects of Spanish banks in a turbulent environment. All this supports the view that it may in fact be adaptive capacity that allows a firm to move beyond operational resilience toward strategic resilience.

Context-specific dynamic capability clusters

Duchek (2020) has conceptualized resilience capabilities into three successive resilience stages: *anticipation*, *coping*, and *adaptation*. It is argued that each of these stages has their own underlying capabilities that collectively build resilience. In the anticipating stage, firms take proactive action before the unexpected event, in observing and identifying critical developments in the firm's environment. With regard to environmental jolts, events are sudden and completely unexpected, but even in this case some firms are able to respond faster than others, which signals the presence of anticipation capabilities that are needed to minimize potential consequences or avert threats completely. Coping in turn, is where the firm accepts the reality of the situation and responds with a proactive change, often in the form of positive adaptive behaviour (Mallak, 1998). Here there is an emphasis on the ability to accept the problems that the firm faces, and the ability to develop and implement effective solutions. Adaptation in turn, is the ability to reflect and learn after the incident, as well as the implementation of those learnings to change for the

better. This then serves as a loop, which further improves the anticipation capabilities (Duchek, 2020).

These three stages bare striking resemblance to Teece's (2007) dynamic capability clusters, only they have been adapted to the context of resilience. This makes a lot of sense from a theoretical standpoint, because sensing, seizing, and transforming capabilities are generally more applicable for continuously turbulent environments, where as their purpose changes somewhat when applied to an environmental jolt. More specifically, the resilience stages better describe what takes place when firms face an external threat, instead of an external opportunity.

Similarly, Burnard and Bhamra (2011) have constructed a resilient response framework, which organizes activities in very much the same manner. There are detection and activation activities first, followed by a response, followed by adjustment and organizational learning, which loops back to detection. This framework, however, is less successful in achieving clarity and order to distinguishing between the temporal dimension, activities, and its underlying capabilities. However, they describe that the activities within the framework also follow the ability to cope, adapt, recover, and advance from a disruptive event (Burnard & Bhamra, 2011).

Most like Duchek (2020), Meyer (1982) has very early on identified three phases in the adaptation process of organizations in the context of an environmental jolt. These are anticipatory, responsive, and readjustment. These are directly comparable to Duchek's (2020) resilience stages, giving support for the fact that they are applicable in the context of strategic resilience and an environmental jolt, and have a long history of being viewed as so. Therefore, the resilience stages more accurately describe the sequence of events and the clusters of capabilities, than do Teece's (2007) capability clusters, but in their essence, they are direct derivations from those. As such, translating sensing, seizing, and reconfiguring capability clusters to the context of strategic resilience in an environmental jolt, they become anticipating, coping, and adaptation capability clusters.

Dynamic strategic resilience capabilities

When it comes to individual capabilities that have been identified within these three dynamic capability clusters in terms of strategic resilience, there is little research

available. The closest are the resilience capacities by Lengnick-Hall and Beck (2005), presented in section 2.2.2.

Here we can recall that the cognitive capabilities of sensemaking and ideological identity, were key to interpreting circumstances and identifying opportunities beyond surviving through the crisis. These clearly fall under anticipating capabilities. Then, it was behavioural resilience capabilities that Lengnick-Hall and Beck (2005) argued as being at the core of an innovative and timely response, stemming from the capabilities of having a varied action inventory and functional habits. These most clearly fall under coping capabilities, though there is some overlap with the anticipating cluster too. Last, it was the contextual resilience capabilities of social capital and broad resource networks, which allow the use of the previous two capability clusters, meaning that the organization can actually adjust. These thus fall under adaptation capabilities. Aside from these, there has been little effort to identify individual dynamic capabilities within strategic resilience.

Microfoundational similarities

To create a solid case as to the reasoning that dynamic capabilities lead to strategic resilience, we should expect to find similarities in their microfoundational antecedents. Burnard and Bhamra (2011) have explicitly recognized that a sustainable competitive advantage may lie in the ability of a firm to develop strategic resilience. They hypothesize that this ability rises out of the individuals, systems, structures, infrastructures, and parameters of the organization (ibid). This description, in part, overlaps directly with the microfoundational aspects of dynamic capabilities, but does not name processes as a major emergent property.

Vogus and Sutcliffe (2007) on the other hand, assert that resilience is a result of the processes and dynamics that create or retain cognitive, emotional, relational, or structural resources. The affective and cognitive resources are comparable to the individual-level microfoundations of dynamic capabilities, with relational paying respect to their interconnected nature. However, processes have again been taken as a separate entity and is characterized to be a precursor to the development of the various microfoundations. This creates a tautological connotation, because certainly those processes are also an output of those very same resources.

In contrast, Coutu (2002) has named three characteristics that are applicable to both individuals and organizations. The first is a staunch acceptance of reality, which is the same as was described as part of the coping capabilities cluster. The second is that there is value-founded deep belief, which gives life meaning, which on the contrary is more strongly related to some of the emotional microfoundations identified in dynamic capabilities. The third is the ability to improvise, which has also been related to dynamic capabilities, although rather elusively. It is evident, that though these may be important resilient building characteristics, they lie on a rather broad spectrum, and are neither distinct capabilities, nor microfoundations. Yet this is additional evidence of the overlap between the two research fields.

Within dynamic capabilities, the concept of learning has been in a key position. Teece (2014) has described the complex nature of this, in that organizations must learn what customers want, what technologies allow, which aspects of a business morel are working, and if the strategy is effective. Although not everything on the aforementioned list is relevant to every context, it goes to show that there are myriad aspects to learn from, and that that learning must be a deliberate effort. Learning has also been highlighted in resilience literature. Weick and Sutcliffe (2007) have written of high-reliability organizations, which are entities that operate in environments where the consequences of their potential errors could be disastrous. Such organizations include air traffic control systems, hostage negotiation teams, or nuclear plants for instance. As these types of organizations must be extremely resilient operationally, they must continuously learn from any mistakes, thus reporting problems or errors are viewed as learning opportunities in these organizations (Weick & Sutcliffe, 2007). It has been found that in these types of organizations, psychological safety is key, so that people feel comfortable speaking up (Carmeli & Gittell, 2009). Not only that, but this also supports the assertion that an organization's legacy is a defining antecedent in strategic resilience, and that it relies on past learning, whilst fostering future learning (Vogus & Sutcliffe, 2007; Morais-Storz et al., 2018).

There are also similarities related to the managerial characteristics that are beneficial for the development of dynamic capabilities and resilience. According to Teece et al. (2016: 15), 'doing the right things under deep uncertainty requires entrepreneurial management.' In fact, it has also been argued that the smaller the organization, the more its capabilities

depend on fewer individuals (Teece, 2012). The literature on resilience agrees, as Lengnick-Hall et al. (2011) contend that organizational resilience stems from individual-level capabilities. Both these strengthen the argument toward there being individual microfoundations.

Specifically, differences in the management capabilities and individual positions have been highlighted. For example, in the context of resilience, the owners are in a key position to reassure that the organization will survive when faced with risks, and they in fact absorb and contain associated emotional anxieties more strongly than mere managers would (Schein, 1983). This is perhaps a dimension most closely related to managing emotions in an environmental jolt. On the contrary, Kurtz and Varvakis (2016) say that both dynamic capabilities and resilience call for an intensely entrepreneurial management style to drive organizational transformation and the development of novel products, processes, and business models. What such entrepreneurial management capabilities entail are is not elaborated on.

Kaltenbrunner and Reichel (2018) have demonstrated that it is a participative leadership style, which fosters dynamic capabilities, as well as the perception of how impactful the leader's actions are. Naturally, an owner of an organization would perhaps perceive the impact of their actions as being greater than an employed manager. Further, it has also been demonstrated that managerial beliefs and behaviours, which are entrepreneurial and drive innovation, facilitate the proactive and deliberate challenging of status quo and is a key requisite of strategic resilience (Morais-Storz et al., 2018). It can thus be concluded that there is a wide body of evidence, supporting that strategic resilience also has individual-level microfoundations.

The affective dimension can also be expected to have sizeable microfoundations when it comes to strategic resilience, because after all, it is only necessary when the firm and/or its external environment are in a state of crisis and emotion run high. Many aspects of the emotional microfoundations, which have been discussed in relation to dynamic capabilities can also be found in resilience literature. For example, Makkonen et al. (2014) have suggested that for resilience, organizations need to foster a positive and forward-looking culture. Mansour et al. (2019) have found that employees are in a key position in firm survival and adaptation in a crisis, highlighting the importance of ongoing employee engagement and participation. Stephens et al. (2013) put forth that emotional expression

in relationships is a foundational element of individual and team resilience. Vogus et al. (2014) link affective foundations to high-reliability organizations, and finally, Norris et al. (2008) attribute adaptive capacities to the wellness and competence of the community population.

Overall, the above synthesis of dynamic capabilities and strategic resilience literature has led to the theoretical framework depicted in Figure 8 below. This conveys the dynamic capability clusters, which translate to the anticipating, coping, and adapting clusters in the context of strategic resilience. Furthermore, literature at current has identified several capabilities each, which may potentially lie under these categories. The importance of prior experience has been highlighted in the form of learning, which takes place and serves as input to the execution of these capabilities in each recurring event of an environmental jolt.

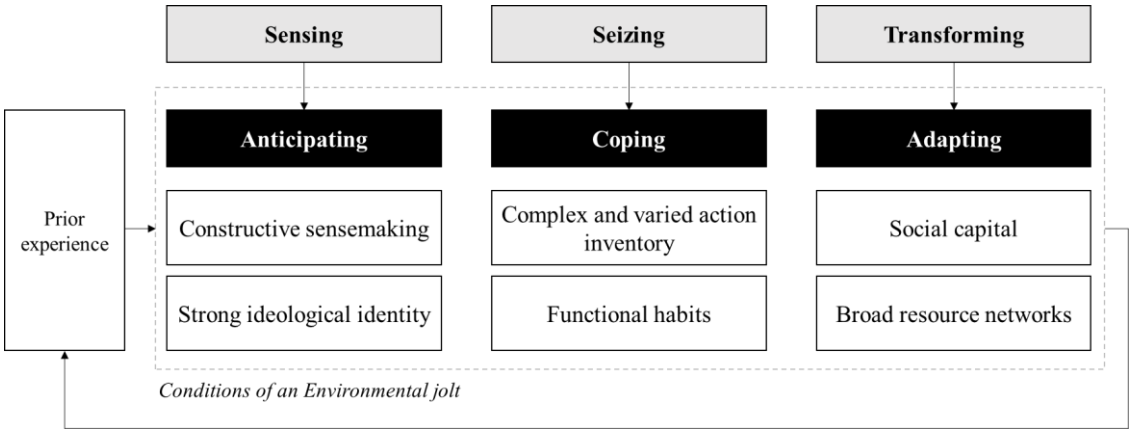

Figure 8 *Proposed framework for strategic resilience based on current literature* (Lengnick-Hall & Beck, 2005; Teece, 2007; Duchek, 2020)

3 METHODOLOGY

In social sciences, methodology refers to the choices one makes during the course of planning and executing a research project (Silverman, 2005). These choices should be justifiable on the grounds of their usefulness for reaching the research objectives that have been set forth, given the available resources. In this section, I attempt to guide the reader through the methodological choices that have ultimately led me to conduct a qualitative interview-based case study. Recognizing the central and subjective role of the researcher in the collection, analysis, and interpretation of qualitative data, I begin with an introduction of my philosophical approach to conducting this research.

3.1 Research Philosophy

As stressed by Eriksson and Kovalainen (2008) all research methods are closely interlinked with the way that it is philosophically possible to create new knowledge through research. In this regard, it is important to set forth my assumptions about the nature of social sciences, in which there has traditionally been a division between objectivism and subjectivism along several dimensions. One of those dimensions is ontology, that is the 'ideas about the existence of and relationship between people, society and the world in general' (ibid: 14). A long-standing ontological debate has been between the *nominalist* and *realist* positions. Nominalists believe that there is no real structure to the world, and instead humans have come up with artificial names and concepts to make sense of and describe the environment around them. Realism on the contrary asserts that there are immutable structures in place, weather we perceive, label or are even aware of them. Thus, the social world exists much like the natural world, as a concrete reality that one does not create (Burrell & Morgan, 1979).

My view is that humans are the only species that can create their own structural social order through shared beliefs and principles, which extend beyond our natural tendencies. I think that although we are inherently guided by common instincts and needs that exist as a concrete reality, the more aware we are of the structures and social behaviours around us, the more power we have to shape and change them. Consequently, it is my assertion that the starting point of the social world has been one that conforms with the realist view, but as we have made sense of it through labelling, conceptualizing, and identifying its components, we have come to live in a reality that has more resemblance with the

nominalist position. This is strongly aligned with a subjective notion of reality, especially as I believe that the more sense one has made of oneself and the surrounding environment, the more power they have over their reality. At the same time, there are structures in place that are universally occurring, though they are not immutable.

Another set of important philosophical assumptions concern epistemology, which is about how one might understand the world and communicate this as knowledge to others (Burrell & Morgan, 1979). In essence, it defines and sets the criteria for what constitutes as scientific knowledge, giving it structure and limits (Eriksson & Kovalainen, 2008). One strong epistemological direction that is rooted in an empiricist position is *positivism*, which explains and predicts events in the social world through regularities and causal relationships (Burrell & Morgan, 1979). Conversely, *subjectivism* is a non-positivist position, which is rooted in the belief that the social world can only be understood from the perspective of participating individuals, and as such knowledge can only be gathered through these social actors. Subjectivism is associated with the interpretivist approach in philosophy. *Substantialism* though, is most reflective of my personal epistemological view, which is that reality is to some extent made up of observable material things, but that people interpret them differently dependent on the time and context. This perspective resembles my ontological position and emphasizes the notion of subjectivity without committing to it fully. This epistemological view is also strongly associated with the philosophical approach of *critical realism* (Eriksson & Kovalainen, 2008).

In search for the philosophical approach that best describes my beliefs, I found a strange dualism in objectivism and subjectivism, with much less attention being paid to the middle ground. Ultimately, I discovered this in critical realism, which assumes the existence of an objective world, which can be more accurately comprehended through scientific research, whilst recognizing that knowledge is a social construct that is subjective, transitive, and in constant flux. Not directly siding with either objectivism nor subjectivism, however, presents a challenge for me as a social researcher. Quantitative methods would not give an accurate portrayal of reality as I see it, yet qualitative methods mean analysing and interpreting data from participants, that may be unaware or may misrepresent the social formations that they are a part of. Regardless, in an effort to understand the world better, I must make methodological decisions that best adhere to the

critical realist point of view, for that is the only way I can stand behind this study and claim that it makes a scientific contribution (Vincent & O'Mahoney, 2016).

3.2 Research Strategy

At the outset, I was faced with the dilemma of choosing the best possible research strategy, that would determine my overall approach to answering the research questions. There is no silver bullet that is the obvious choice for all research circumstances, so I had to begin by first identifying the alternatives available, followed by their evaluation on the basis of several factors, including suitability and feasibility. Within social sciences based on critical realism, there are three methodological guidelines (Danermark et al., 2002: 73-74);

1. All science should be generalizable.
2. Besides induction and deduction, abduction and retroduction are indispensable modes of inference.
3. The aim of social science research is to explain events and processes.

Essentially, the purpose of my research is to understand the complex roles and relationships between factors, that is dynamic capabilities and cognitive and emotional processes, in an environmental jolt. Considering this purpose in detail together with the methodological guidelines of critical realism, as well as my criteria for feasibility and suitability, led me to the conclusion that a case study is the most fitting research strategy. What follows, are the justifications for this decision (Denscombe, 2010).

Depending on the philosophical standing, science has two ways of defining generality: the empiricist definition, where knowledge from a small sample is extended to a larger population, and the realist definition, which refers to the universal preconditions for an object to be what it is (Danermark et al., 2002). In other words, some phenomenon can be general in the sense that it is generally occurring, or in the sense that it has some fundamental hidden properties and structures (ibid). This study does not attempt to generalize in the empirical sense of extrapolation, but rather aims to contribute to knowledge about the underlying structures and mechanisms that enabled strategic resiliency. These are called transfactual conditions, which are the more or less general conditions for something to be what it is. Moreover, the outcomes of this study may be used as evidence for or against studies that have or will attempt to create claims of broader

generalizations in a similar context, either in a realist or empirical sense. As simply put by Denscombe (2010: 53), 'the aim is to illuminate the general by looking at the particular.' On these grounds, the case study strategy fulfils the first methodological guideline given above.

3.2.1 Case study

The idea of a case study is to study one or multiple cases in detail, from amongst many others, and to use research methods that enable the formation of as full an understanding of the case as possible (Punch, 1998 cited in Silverman, 2005: 126). However, there are several different schools of thought on the types of case studies that can be conducted, and the implications that arise from such a choice.

Denscombe (2010) categorizes case studies in terms of their discovery-led and theory-led uses. The discovery-led uses of case studies use inductive logic, focusing on the description, exploration, or comparison of cases. Conversely, theory-led case studies use deductive logic to either explain events, illustrate an application of theory or to experiment with the case. Inductive and deductive logic are two forms of formalized logic for inference, to which Danermark et al. (2002) add another two; abduction and retroduction. I will return to the discussion on inference and the second methodological guideline presented above, in section 3.4 on data analysis, and for now concentrate on describing the more general strategy of this case study.

Much like Denscombe (2010), Stoecker (1991) has identified two different types of case studies; intensive case studies, which aim to form a holistic understanding of a unique case, and extensive case studies, which aim to elaborate, test, or generate generalizable theoretical constructs from multiple cases (Eriksson & Kovalainen, 2008). In contrast, Stake (2000) has classified case studies into three different types: *intrinsic*, *instrumental*, and *collective* case studies. An intrinsic case study resembles an intensive or discovery-led case study, where a case is studied in depth but beyond a rich description, no attempts are made at generalizing beyond that case. An instrumental study is one where a single case is studied in depth, but the aim is to gain insight into an issue or to revise a generalization. So, a case is selected as a tool of sorts for the in-depth examination of a phenomenon, not the case itself. Last, a collective case study is one where a number of

cases are selected to study a general phenomenon, much like the extensive case study (Silverman, 2005).

Both Denscombe's (2010) and Stoecker's (1991) division between the two types suggest that case studies are either based on theory with the ability to create generalizable scientific knowledge, or that they are detailed descriptions that have no basis in theory and are merely narratives of a particular situation. With this logic, there is no value in social science for qualitative single-case case studies. My perspective is that an in-depth case study of a phenomenon is not mutually exclusive with conducting a theoretically informed, or theory building study that contributes to generality. This is why I would most agree with Stake's (2000) categorization of case studies.

I am studying topics that have been studied before, but in a completely novel context. This means, that it would not be meaningful to merely describe a case in detail, because as apparent from prior literature, several applicable theoretical constructs are available. Further, it is not the specific case that is at the core of this study, but that the case serves as a means to examine a phenomenon that has also taken place in other cases. Thus, I would characterize this research as an instrumental case study, since I pursue to study one case in depth, yet try to relate those insights more broadly to theories of dynamic capabilities and cognitive and emotional processes. This goes hand-in-hand with critical realism, because though I recognize potential underlying structures, I also know that the case is unique and studying it from within will yield a subjective perspective of those structures.

I did consider conducting a longitudinal case study of one or multiple cases, because this has been a popular research strategy in the dynamic capabilities field (Wang & Ahmed, 2007). Attempting to study several cases collectively, or to conduct a longitudinal case study, would perhaps bring forth more empirically generalizable results, but this is simply not feasible for my research, given the constraints in time and resources. The fact that the single case study approach has also been used in this research area, resulting in several theories in the field, gives confidence in this research strategy. However, no generally accepted theory has emerged in this context, which implies that there is a need to delve into this case in an explorative manner, using the theoretical framework of Figure 8 introduced in section 2.3.7 of the literature review as a starting point for explaining the

causes of events and processes in accordance with the third methodological guideline above.

3.2.2 Qualitative research

A case study approach does not dictate the method, or methods, used in the research but allows the researcher to use a variety of them depending on the circumstances (Denscombe, 2010). For this reason, I had to consider what type of data I would want to collect and analyse within the chosen case; qualitative, quantitative or both. On the one hand, quantitative studies are appropriate for generating empirically generalizable knowledge, particularly when examining the relationship between two or more variables. On the other hand, qualitative studies are more suitable for a fewer number of cases, where there is a priority in depth over breadth. Additionally, some cases may warrant the use of both methodologies in order to simultaneously document detail and to identify variance (Silverman, 2005). Despite the commonly held position that quantitative methods are necessary for generalization, it has been demonstrated in social sciences that many generalizations are in fact grounded in qualitatively oriented case studies (Danermark et al., 2002).

Quantitative research is highly dependent on the ability to identify a set of variables, which are then quantified with widely accepted units of measure. It can also be experimental, where the studied situation can be manipulated to deduce the relationship of one variable to another. Furthermore, this methodology is highly suitable for testing already proposed theories because of its rigour, which makes it deductive in nature. Conversely, qualitative research tends to be inductive, in that it is concerned with developing concepts or theories that help to make sense of the social world. As such, it emphasizes the opinions, experiences and feelings of the individuals researched, which leads to a set of subjective data that should occur naturally without any attempts at its manipulation (Hancock, 1998).

In considering the research methods for this study, it was imperative to reflect upon the nature of the research questions, the first of which is centred around the role of dynamic capabilities. As laid out in the literature review, dynamic capabilities can come in many different forms and remains a shifting concept that at its core is descriptive of a firm's ability to adapt through a combination of processes, structures, knowledge, behaviours,

and other such properties. As a result, there is a vast amount of complexity involved in merely identifying the dynamic capabilities that are at play in a firm, let alone the effort in trying to quantify them in a meaningful way. As fittingly explained by Barr (2004: 167) 'qualitative methods provide the opportunity to identify and explain complex relationships without having to pre-specify either the variables involved, or the nature of the relationship between them'. This makes qualitative research methods especially useful for the study of hidden structures and transfactual conditions.

Not only that, but it is also precisely the reason why the majority of empirical research in dynamic capabilities, are qualitative studies based on single or multiple case studies (Verona & Ravasi, 2003; Mota & de Castro, 2004; Brady & Davies, 2004; Wang & Ahmed, 2007; Kuuluvainen, 2011; Aramand & Valliere, 2012; Tallott & Hilliard, 2016). According to Wang and Ahmed (2007), qualitative research forms an important basis for theory building in the area of dynamic capabilities, where insights into firm and industry specific processes are gained. Consequently, qualitative research in this area should continue, but as it becomes more ample, quantitative methods could be applied to identify linkages and commonalities across cases.

The second research question of this paper concerns emotional dynamics, which is a topic that sits well within the non-positivist and emotionalist research models. Qualitative research tends to be based on a non-positivist model of reality, where the details studied give a deeper understanding of a social phenomenon, than could be derived from quantitative data. Additionally, qualitative research has strong ties to the emotionalist research model, which emphasizes the study of perceptions, meanings, and emotions (Silverman, 2005).

The theoretical underpinnings of cognition and emotion lie in behavioural and managerial sciences, which are very much concerned with the study of social interactions and psychological processes. Studying such areas requires the interpretation and explanation of events from the perspectives of the studied organization members themselves. Qualitative research is best positioned for this purpose (Lee, 1999), as it allows the researcher to probe deeper into the perspectives of individuals, as opposed to a quantitative approach that fails to capture these perspectives because of the more remote, inferential research methods that are used (Denzin & Lincoln, 2000).

The above analysis of the research questions clearly indicates that the preferred methodology to address them is a qualitative approach. This is further favoured by the fact that strategy has come to be inherently perceived as a social creation that develops through managerial interactions that occur between decision-makers and the environment. The social orientation and the contextual view or strategy therefore demands a more qualitative approach to its research. Not only that, but dynamic capabilities research has seen little construct definition despite all its conceptual development, which leaves the field with little understanding of the relationships and linkages that exist between those capabilities and firm performance (Barr, 2004).

3.3 Data Collection Method

Possible qualitative data collection methods include interviews, focus groups, textual analysis, or observation, the benefit of which are the richness of the data and a deeper insight into the area under analysis (Hancock, 1998). Out of these options, observation and textual analysis were ruled out as it was expected that no such data may be available, because the research is conducted after the events that have transpired. Furthermore, these will not shed any light on the cognitive and emotional aspects of this study but would be more appropriate for the collection of factual information. On the contrary, interviews can be exploited well when applied to exploratory studies that delve into more complex and subtle phenomena, as is the case here (Denscombe, 2010).

Silverman (2005) also raises the point of a broader social context within which research methods are used. In particular, he suggests that we may even be living in an ‘interview society’, where interviews are commonly used in mass media, therapy and by consultants, to make sense of our lives and those of others (ibid: 111). This is important from a data collection perspective because it is instrumental in creating a setting where both the subject of research and the researcher feel comfortable, whilst talking about experiences, emotions, and sensitive information.

According to Miles and Huberman (1984) cited in Silverman (2005: 110), qualitative researchers must consider the extent to which they will engage in prior instrumentation, that is the use of predefined methods and measures. With no prior instrumentation, the researcher will approach data collection in an unstructured manner, where they purposefully remain open to unsuspected phenomenon. With considerable prior

instrumentation, the researcher will be very focused on collecting and capturing certain data by using predefined measures and methods, that have also been used in prior studies. In this way, the research is more comparable but may miss something due to its rigidity. They go on to describe that exploratory studies require a less structured approach with less standardized instruments, because the focus is not on cross-case comparison. Despite this, a complete lack of structure can lead to superfluous data and diminished quality.

I made the decision to use semi-structured interviews as the research method for this study. This data collection method includes asking a series of open-ended questions, which define the topic under discussion but allows the interviewer and interviewee to digress and discuss some elements of interest in more detail (Denscombe, 2010). An advantage here is to make sure that key topics are covered in the depth or breadth most appropriate for the situation. An interview is not a mere conversation, but it should resemble one, which allows the interviewee to feel more open to discuss and share their experiences with the interviewer in detail.

In practical terms, the general topic of this research emerged as a result of the events taking place globally during March 2020. From the mainstream media flow of information, emerged the narrative that most businesses were facing an existential crisis, but not all. Some were not only able to find innovative ways for safeguarding their own business activities but were also responding to the global demand surges in certain healthcare products. This seemed interesting and got me wondering why some were able to act in this way, whilst so many clearly were not. In early March, I began listing these companies as they were highlighted in various news outlets, both national and international.

In Finland, Kyrö Distillery Company was one of few that was highlighted early on in mainstream media channels. As time had went on, my case selection efforts became primarily focused on Finnish companies, because as a researcher I am most familiar with this operating environment and it was likely that gaining access to local companies would be easier. After following the listed companies for a period of three months, it appeared to me that Kyrö was both the most visible in their hand sanitizer related operations, and the most innovative. Therefore, I emailed the CEO of Kyrö Distillery Company and was granted access to research them as a case and conduct interviews with key personnel. Selection of interviewees was carried out by the CEO, who was the primary contact

person and facilitated arrangement of the interviews with those who he saw as being central figures in Kyrö's hand sanitizer pivot.

The data collection was carried out by conducting seven in-depth, semi-structured interviews during September 2020. The interviews were carried out in Finnish using an interview guide, which was more strictly adhered to at the first interviews and deviated more from, as themes and topics began to emerge that warranted asking unforeseen questions. The interview guide, presented in Finnish in Appendix A, was constructed utilizing the theoretical framework in Figure 8 as a starting point, to make sure that all important topics and perspectives were covered. Furthermore, background information was collected in preparation for data collection, including studying online channels, media coverage, and getting familiar with operations by visiting the distillery in Isokyrö.

The interviews lasted for approximately one hour and were held remotely, with one interview held over the phone and others face-to-face as an online meeting. At the beginning of each interview, the interviewees were granted anonymity to create an atmosphere of psychological safety to discuss difficult, personal, or controversial topics. However, verbal consent was obtained to use anonymized quotes when reporting the results of this study and for recording the conversation. For this purpose, a mobile application was used to record the interviews and all interviews were manually transcribed in full using an online tool.

3.4 Data Analysis

Thematic analysis is the most common method of data analysis that is used in qualitative work, with the aim of identifying, analysing, and reporting common patterns from the data (Braun & Clarke, 2006). Braun & Clarke (2006) list the benefits of this method, explaining that thematic analysis can be used flexibly and is compatible with multiple theoretical and epistemological positions, whilst being capable of providing a rich, detailed, and complex account of the data.

Before settling for thematic analysis, the grounded theory method was also explored as an alternative. This is originally an entire methodology developed by Glaser and Strauss (1967), in which the aim is to construct theory from data. Since then, however, multiple versions of grounded theory have emerged and the term is often used rather generically to describe the process of coding data and to denote theoretical constructs from the

qualitative analysis of data (Braun & Clarke, 2006; Corbin & Strauss, 2008). As such, grounded theory is in a lot of senses similar to thematic analysis, yet it is also bound by some further theoretical constraints (Braun & Clarke, 2006). Consequently, the flexibility and freedom of thematic analysis was favoured in my data analysis, though I have incorporated process elements from the grounded theory methodology in coding the data.

3.4.1 Logical approaches to data analysis

In data analysis, there are several logical approaches to interpreting the data. An *inductive* approach is an exploratory one, where identified themes are data-driven and no attempt is made to try and fit them in a pre-determined theoretical frame (Braun & Clarke, 2006; Denscombe, 2010). Out of inductive reasoning, one can draw conclusions and find similarities between cases, in order to create empirical generalizations (Danermark et al., 2002). This research approach is most apparent in the grounded-theory methodology.

In contrast, a theoretical approach to thematic analysis relies on *deductive* logic, where the starting point for identifying themes in a data set is the researcher's analytic interest in the area or a theoretical starting point that relies on the rules posited by prior research (Braun & Clarke, 2006; Danermark et al., 2002). Induction and deduction are most often discussed in literature on social science methods and methodologies, but Danermark et al. (2002) have also highlighted *abduction* and *retroduction* as two more modes of inference that are more often overlooked, of which abduction is relevant here.

It is often true that cases and objects in general are both unique instances of a phenomenon, whilst at the same time manifestations of a more general structure. The pitfall of deduction in the theoretical approach, is that it does not bring forth any novel ideas about the studied domain but follows a strictly logical structure. The inductive approach draws generalizable conclusions from a number of observations, but we can never be analytically or empirically certain that they hold true. Abduction sits in between these concepts, where we have an empirical phenomenon that we relate to a conceptual framework, theoretical idea, or a rule and through that derive new ideas about the studied event. It differs from deduction in that we show how something might be, rather than proving how something certainly must be (Danermark et al., 2002).

In abduction, the theory serves as a frame of reference, which helps to interpret the event or explain it from a certain perspective. This theory is viewed as something that may be

plausible or not, and so the conclusion and case may be used to also challenge the theory itself or to create a different interpretation of it in light of the case in question. In my data analysis, I have used abduction as the approach to data interpretation, where I have attempted to identify themes through the prior knowledge from literature and the conceptual framework of Figure 8. However, the data itself is used to influence that framework and to draw conclusions that at the least apply to this case, but potentially others as well. This will create a revised interpretation of the theoretical rules that guided the data analysis in the first place.

3.4.2 Coding process

Braun & Clarke (2006) set forth a six-step process for thematic analysis, in which the researcher iterates and moves back and forth between phases throughout the analysis. The process flows as follows; (1) familiarization with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, (6) reporting (Braun & Clarke, 2006). I began with the first step, getting familiar with the data by transcribing interviews soon after they took place and making some initial notes and questions, which in turn would then guide subsequent interviews. Corbin and Strauss (2008) explain that data analysis should start as soon as the first interview has been completed, so that those initial findings can be used as a foundation for further data gathering.

So far, the process resembles that of de Casterlé et al. (2012) who have proposed an analytical process named The Qualitative Analysis Guide of Leuven (QUAGOL). In this method, the analysis is iterative and begins immediately following the first interview and stresses the importance of preparing the data for coding, deliberately postponing the actual coding task so that one is adequately familiar with the data to know what to look for in it. After conducting each interview, I returned to the transcribed manuscripts of the interviews and re-read them in turn without making an effort to analyse the material. It is important to resist this urge, because it allows the researcher to fully experience and listen to what the participants are trying to express (Corbin & Strauss, 2008).

Corbin and Strauss (2008: 161) posit that thorough analysis of the data at the beginning ‘leads to rich and dense description and as well as to well developed theory.’ For this purpose, de Casterlé et al. (2012) recommend creating narrative reports of each interview,

along with conceptual schemes that can be used to constantly compare interviews. Instead of narratives, I decided to create a detailed analysis of the data using memos, which does indeed take the familiarization with data to a deeper level than is described by Braun and Clarke (2006), perhaps bearing more resemblance with initial coding, though this does not entirely accurately describe the activity either. I wanted to follow the process for memo making exhibited by Corbin and Strauss (2008), in which the interview is divided into smaller segments, so I resolved to analyse responses in detail by making notes on my interpretations isolated data segments. For this, I used the coding tool ATLAS.ti, which was useful in creating an overview of the data and any codes I would assign.

After making a note, or memo of my interpretations on a data segment, I would assign initial codes to them if I had identified any broader themes in that segment. Corbin and Strauss (2008) describe coding as interacting with the data to develop concepts that stand for the data. I did this by assigning codes of different levels of depth. After finishing the initial analysis and coding of each interview, I observed the frequency of different codes and took on axial coding to relate concepts to one another and to create higher-level categories. This occurred iteratively as the codes lived and themes developed, and as new concepts emerged, with some clearly less frequent codes discarded from themes. At this stage, themes could freely emerge without using any theoretical framework as reference.

In the end, I observed the different themes that had emerged at different levels of depth and used them with application of the approach of Corley and Gioia (2004), where the different levels of themes were grouped into first order concepts, second-order themes, and finally aggregate dimensions. At this stage, I also actively renamed and defined themes to recapture the true essence of the data. The process was highly iterative and rather time consuming, as it required examination and interpretation from multiple perspectives, coupled with continuous synthesis and comparison. In the end, the careful preparation of the data, and the established familiarity with it brought confidence in the end result.

3.5 Limitations

Throughout this research, I have tried to foster an attitude of self-reflexivity, so as to counter any possible biases or hidden motivations that may have affected the collection of data or its analysis (Tracy, 2010). Despite this, there is always the possibility that

unconscious beliefs may have steered the research into a particular direction and that given the same data, another researcher may have come to quite different conclusions about the topic in question. This is one major disadvantage of conducting research alone, as there are no sanity-checks or collective validifying of interpretations that are available as tools when multiple researchers are involved. Therefore, the researcher is at the mercy of their own subjectivity.

The current conditions regarding the pandemic, meant that interviews were held remotely. This may have led to a different outcome, that may have taken place had the data collection occurred in person. Although I made every effort to keep the atmosphere conversational and informal, a personal presence could have made more of a difference in building rapport, and therefore in generating richer and more personal data. With some respondents, this was very successful, often because of commitment to the process, where the interviewees had allocated sufficient time for the interview and were fully present. In other cases, interviews were interrupted by phone calls or other distractions, that are unlikely to have cut the flow in a face-to-face scenario. In the case of one respondent, they were even balancing another task during the interview, which likely led to the collection of rather superficial data.

Related to the above point, semi-structured interviews worked well in digging deeper into topics raised by the interviewee, because of the flexibility that it enabled (Denscombe, 2010). This meant that I could ask further questions, that often revealed another, more honest layer beneath the very positively framed initial response, that is perhaps the norm when giving interviews to external parties. The one-to-one nature of the interviews, coupled with identity protection, also facilitated the building of trust and creation of an honest discussion. However, Denscombe (2010) points out that research has shown that interviewees provide different responses depending on their perception of the person asking the questions. It may be, that participants would have been more or less willing to give up honest information and share their true feelings more openly, had a person of different age, gender, or ethnicity performed the interview, or if the interviews had been carried out in another language.

Unfortunately, it will remain unknown to what extent the above factors limited the validity of this research, but it is important to be transparent about this possibility. In general, the open culture at Kyrö Distillery Company was in a noticeable position to

curtail the above worries and participants were engaged and willing to volunteer meaningful information for the most part.

3.6 Ethical Considerations

In this research, it was considered ethically correct to ensure the anonymity of the interviewees, due to the personal nature of the topics discussed. As such, participants have randomly been assigned a number as an identifier to shed light on the breadth of support provided by the data and to refer to individual participants. However, titles, genders and other such information is not given, for they can easily be used to identify individuals in a small organization.

The data presented in section 4 has been translated from Finnish to English and for clarity, and are transcribed intelligent verbatim, as opposed to strict verbatim that was the style of the original Finnish transcripts. Special care has been taken not to distort original meanings, however, information considered strategically sensitive for the case firm has been omitted, so as not to break the trust instilled in the researcher.

4 FINDINGS

In this section, the central findings deduced from the collected data will be presented. As discussed previously, the coded data has been grouped at different levels, resulting in the construction of a code-tree that follows the data analysis method of Corley and Gioia (2004). The code-tree of first-order concepts, second-order themes and aggregate dimensions is presented below in Table 2.

1st order concepts	2nd order themes	Aggregate dimensions
• Rye whisky as core product • Strong brand • Kyrö stories • Permanence of value-rooted identity • ”Kyröläisyys”	Strategic identity	Shaping behaviour
• Value-guided partner selection • Win-win approach to collaboration • Bargaining power of supplier used to enforce pricing principles • Loyalty to locality	Value-driven decision-making	
• Cognitive re-categorization of events from threats to opportunities • Values as a tool for aligning perspectives • Expanded cognitive frame	Shared cognitive frame	
• Spontaneous formation of agile teams • Prior experience • Collective problem solving • Communicating often and transparently	Activation of improvisation, as needed	Structural agility
• Re-allocation of management attention • Semi-structured organizational routines • Flexible role-boundaries • Awareness of diverse competencies	Quick orchestration	
• Relationship-building routines • Freedom to be yourself • Acceptance of failure • Open communication	Psychological safety	High employee engagement
• Authentic caring for people and society • Active management of emotions • Management focus on employee well-being • Work should be an enjoyable part of life	Human-centricity	
• Active distribution of responsibilities • Entrepreneurial drive through founders • Employee fit with community culture • Low hierarchy	Entrepreneurial behaviour	
• Confidence from prior successes • Internal fit with existing business operations • Expanded emotional frame	Belief in success of project	Resource commitment
• Operating under threat to survival of the firm • Framing: Failure is not an option • High-market demand for hand-sanitizer	Increased risk-appetite	
• Channeling negative emotions • Promotion of togetherness • Collective experience • Peer-support	Togetherness through shared mission	Psychological commitment
• A higher purpose through societal impact • Taking ownership of job security	Catalyst for perseverence	

Table 2 *A code-tree presenting the analysis of the collected data*

As depicted by the code-tree, a total of five aggregate dimensions have been identified. Each will be discussed in turn, along with their corresponding second order themes, all the while presenting direct extracts from the data as evidence to demonstrate the manifestations of related first-order concepts. Finally, the section will conclude with an arrangement of the five aggregate dimensions into an aggregate model of strategic resilience given in section 4.6.

Before I begin my discussion of the aggregate dimensions, it is important to revisit the common antecedent of many of the concepts, namely the Kyrö Distillery Company's values. Summarized, these values are daring to do things differently, unpretentious enjoyment by loving what you do and respecting others around you, communality through doing things together, humour in telling the best stories, trusting in yourself, people, ingredients and being trustworthy as a firm (Kyrö Distillery Company, 2020b).

4.1 Shaping Behaviour

The first aggregate dimension includes those concepts, which guide the behaviour of the firm in its external environment. It was observed that the relevant first-order concepts could be grouped into three broader themes: *strategic identity*, *value-driven decision-making*, and *shared cognitive frame*. Collectively, these second-order themes form the aggregate dimension named *shaping behaviour*, which is descriptive of the way in which these themes ultimately cause the firm to proactively seek ways of making an impact on its surrounding environment. The hand-sanitizer pivot was one embodiment of such shaping behaviour at Kyrö, but the concepts that drove this behaviour could also be observed in the firm's strategy and operations more broadly. The value-based origin of the first-order concepts in this dimension, is seen as a significant factor that steers the organization toward decisions that are not only based on business logic, but also a strive to influence its operating environment, be it the local community, the current market, or the society as a whole.

4.1.1 Strategic identity

The first second-order theme that was identified within shaping behaviour, is strategic identity, which refers to the way that Kyrö has defined itself as a firm in a way that ties together its brand, strategy, and product through its values. In fact, many interviewees

referred to the strong brand as a key driver of Kyrö's growth strategy, and it is apparent that this has been the result of deliberate strategy making from the outset.

> *... the brand itself has been our central element right from the start, so from that very first sauna-evening, when in practice we noted that in order to be able to be a credible spirit producer in Finland, we have to create the credibility in people's minds. We cannot trust that the fact that we come from Finland would automatically create that credibility, whereas if we had, say founded a whisky distillery in Scotland, then there would have come the kind of "okay this is a new Scottish distillery", so it would have been by default credible and interesting. So, this has forced us to work on the brand with a strong piety…* (Interviewee 4)

It is evident, that at the heart of the brand-centric strategy is the need for Kyrö to both establish itself as a credible whisky distiller, and to differentiate itself from competition. Whisky is a premium product by default and one where the customer does not want to be disappointed in their choice. Thus, the consumer is very much guided by the perception of the quality of the product, and the willingness to try new brands without some assurance of quality is low.

As described in the above extract, whisky distilleries from certain renowned regions get an automatic stamp of approval in the eyes of the customers, as a consequence of the history of quality and know-how that is attached to their products. Since Finland is not a region that is known for whisky, that same sort of credibility has to be built by the firm itself. The most effective way to do this is to create a brand identity in a way that generates the perception of high-quality through other attributes. These sorts of attributes are enforced systematically through design choices, for example, high-quality may not be an attribute that is immediately associated with Finnish whisky, but it is with Finnish design. Furthermore, Kyrö makes many other types of products, the categories of which do not have the same credibility strains. Thus, a meticulous focus on product quality throughout the portfolio, also instils trust that the quality of Kyrö's whisky is sound.

However, Kyrö has had to shape its brand strategy during its journey, because the same attributes that have worked in Finland are not directly transferable abroad.

> *... in Finland we had grown big and in Finland people buy our products especially because we're kind like this sort of national hero. So, it's associated with Finnishness and Finnish design and the likes, but abroad those same sorts of attributes don't necessarily exist, so we researched what those things are that kind of in our overall brand and the products appeal abroad, and at the same time researched in what way we could, with limited resources, grow as quickly as possible. So, then we found that we have to simplify the model quite a lot, so we then gave up on the Napue and Koskue names and so forth.* (Interviewee 4)

To Finns, the narrative had been that Kyrö is the embodiment of Finnishness, with local roots and stories around the town of origin, Isokyrö. This has been very successful, and the brand has grown strong domestically, but as the firm looks to grow internationally, they must strip away some of the layers of the brand and make it more targeted at a wider cultural audience. The necessity for this was already seen during the early success of the firm, when Kyrö won an international competition with its Napue gin. This helped it to create the much-desired credibility and the attribute of high-quality, but it was evident that this was more directed towards the product brand rather than the company brand. Also, the exotic name of the product led to some confusing situations when customers were handed napkins instead of gin by bartenders.

Recognizing the spill-over benefits and to make the use of resources more effective, the company has transferred to a monolithic brand strategy and given up on its strongest product brands. This must not have been easy, given the success and awareness that they generated early on, but on the other hand, being able to do so conveys that the firm identity is rooted in something deeper, which the product family and its brands have shared in common - the firm's values.

When everything that is associated with the firm is bound in its values, it does not matter if Kyrö makes substantial changes, because its identity is always the same. This identity is expressed through elements that remain as constant characteristics of the firm.

> *I would argue that it was brand-centric work from the start, and a part of that is about the structural fact that in Finland the marketing of alcoholic beverages, strong alcoholic beverages is forbidden. So, we had to bring forth our company image, which then again is allowed, and to bring forth that company image we*

> *had to have both stories and visual narration, but also these artefacts, which can then be used, owned, or encountered outside of these two permanently*. (Interviewee 5)

Interviewee 5 describes the prohibited marketing of alcoholic beverages in the Finnish market as another reason why the brand has become such a central strategic element. To be able to create dialogue with customers and awareness of the brand despite regulatory restrictions, Kyrö has had to build up the company identity as a mediator for its products. The regulatory climate in the domestic market is often viewed as a hindrance, but in Kyrö's case, it has in fact forced them to a strategy, which does not confine them to the alcohol business, but allows them to also leverage its brand for other ventures. In order to build the Kyrö identity, values have been used as a foundation to define who Kyrö is and what it represents. For example, the firm has incorporated many local elements from Isokyrö into their brand artefacts in accordance with locality. This has been useful for domestic marketing, because it creates stories around the product and the brand that go beyond typical Finnish stereotypes, and as such are also interesting to the Finnish market.

Internationally though, the identity has been built to what it is because reaching the same level of credibility with the competitors is not enough, and Kyrö must additionally compete within the whisky category through differentiation. It does so by creating a completely novel product category in rye whisky, but as Interviewee 2 put it, this means that they 'have the burden of having to convince the consumers almost one-by-one'. The strategic nature of Kyrö's identity strongly stems from the fact that the organization's values make it very different from its competitors and appeal to a very specific consumer group that shares them.

> *And then the daring, that in the way that we do, want to do, and also encourage people to do those things… if we think about our starting point, which was that no one believed it was possible to make liquor in Finland profitably, except for the state, then it's challenging those existing… what is it – status quo, where it's like that but on the other hand challenging it in a constructive way. After all, Kyrö is a kind of boy scout as well. We're not like in any way a radical firm, but we still try to challenge things but through trying to bring something better instead.* (Interviewee 2)

Above it is described that making a new type of whisky, one made of rye, and beginning from scratch with it in a country that has a very strict regulatory environment, and a state-controlled monopoly in sales, requires a mentality of daring to challenge the current normal and to chase a dream. This attitude is directly written in Kyrö's values, and so it strongly guides its operations to shape the markets through challenge and disruption. Yet the locality, trust, and humour, also make Kyrö a very goodwilled brand, and thus highly relatable for those that want change but for the better, and through constructive means. This is very much the sentiment within certain groups of people, who appreciate life and want to enjoy it, but also want to see us going forward by taking care of each other and the planet. Yet these are not necessarily the people who find a directly relatable brand in the whisky isle, and thus what Kyrö represents is a whisky from people like them for people like them, all bound by the same value system.

In all, the elements discussed here, namely the brand and the stories around it, are strategic tools that have been designed from the start to support the strategy of Kyrö's rye whisky in the domestic and international markets. As the company has grown and its strategy has been adjusted, the brand and narrative have also been able to adjust without compromising the identity of the firm, because all are bound by the values of the firm, which on the contrary have remained stationary throughout its strategic journey. Therefore, these conceptual elements come together under a second-order theme that is strategic identity. Strategic identity drives shaping behaviour, because it is built directly into the Kyrö identity through the value of *daring*. The story and the brand have an aura and narrative of being brave and challenging, which is also what Kyrö has to do in order to enable its core business in rye whisky.

4.1.2 Value-driven decision-making

The next second-order theme that stems from Kyrö's values and brings forth its shaping behaviour, is value-driven decision-making, which is a more operationally oriented theme than the others in this dimension. The research participants gave many examples of how the company values drove decision-making during the pandemic, in a way that geared the firm towards shaping behaviour. One instance of this was when the firm was faced with unexpectedly high demand for its hand sanitizer and had to decide which customers to serve first.

> *... there was an absurd amount of demand, so it had to be handled somehow, like where we actually want to give or sell it (hand sanitizer) and where we don't, because that could really fast result in a situation where we see the product being sold at terrible prices on the shelves of some completely random stores, and we didn't want that. And from the very start it was clear to us that first we can offer the product for the critical areas, and we don't want to make profit with it per se, although we do want to keep the firm going so that it covers our own expenses, but the purpose was not in any case that now we'll cash in with this.* (Interviewee 6)

The firm viewed the hand sanitizer as an opportunity to shape its environment through its values, and so it had to maintain a very high degree of control over the product to make sure that other entities in the supply chain or the products positioning on the market did not compromise its original purpose. Therefore, the values guided decisions regarding the products pricing and prioritization in its supply.

> *... at the beginning it was clear to us straight away that for example the local healthcare, the local elderly care, these sorts of critical services are the ones we'll serve first, and in the case of Isokyrö for free as well. So even though I talk about a commercial activity, we wanted to incorporate our value-based activity into the project from the start […] when we got that side initially in order, then we started conversations with regards to consumer sales, and we decided at the very start that we would not give them (hand sanitizer) to a wholesaler, because we had specifically seen the kind of most arrogant price arbitrage and the kind of market extortion through pricing from these entities […] so we spoke directly to the central movements (S and K-group retail chains in Finland). We made it clear that we have a clear pricing principle with this product, and so that there would be no misunderstandings about that, we also put the product on sale to our online store at a significantly lower than market price, and even from that price we promised to donate money to a local charity…* (Interviewee 5)

In the example above, we see that many of Kyrö's values were present in several decisions that they made about the hand sanitizer during the pandemic: daring, communal and trusting in particular. Clearly there is a loyalty to locality and a perseverance in making sure that the products values are realized so that it actually shapes the environment. There

is also a rather bold element from a small player in a new market, where Kyrö utilizes its bargaining power with the biggest retail chains in Finland only to ensure that the product pricing takes place, and then goes even beyond that to sell it in a channel that is under their own control.

Here the values were in a core position from the very start of the project, also because they were the main motivator for it. However, value-guided decisions that shape the world around the firm are also present in other decisions that the firm makes under normal conditions.

> *Well, they (the values) guide us very strongly, so that everything we do at Kyrö is value-based, and we do actually return to them surprisingly often in decision-making and for example in our co-product or co-branding possibilities, we evaluate what their values are versus our values and so on, so we do return to them (the values) again and again surprisingly often…* (Interviewee 3)

This shows how values are used to assess various opportunities, in both normal conditions, and during the environmental jolt. With the hand sanitizer, the decision to proceed with the project was finalized when the circumstances changed in terms of the value-criteria, despite all other variables remaining constant. This speaks to the weight of the values in situations where the firm makes decisions regarding its shaping behaviour. It is also possible, that because this was a normal part of the firm's decision-making routines, it also became very naturally in the crisis situation.

4.1.3 Shared cognitive frame

A cognitive frame can be described as the lens through which we perceive the different entities around us. In the management context, they are mental models that determine an individual's view of the firm, categorizing environmental and internal factors differently depending on the held model. Cognitive frames are an important psychological aspect in management, because when different individuals hold different mental models of the same firm, it can lead to conflicts in decision-making. Conversely, if the management team hold a collective cognitive frame, which misinterprets important cues, then the firm is susceptible to making decisions that are detrimental to the firm. In the case of Kyrö, a theme emerged with conceptual elements that pointed to a shared cognitive frame, which was borne out of the firm's values and triggered the shaping behaviour in the crisis.

Kyrö's shaping behaviour was epitomized in its entry to the hand sanitizer market during the COVID-19 pandemic. This type of behaviour was a deviation from the norm, where most other businesses took defensive measures against a perceived threat, as opposed to proactive measures to seize a perceived opportunity. The data indicates that the cognitive categorization of events in the operating environment could be the cause of this incongruity.

Because of its worldwide export markets, Kyrö monitored the evolution of the pandemic outside of Finland prior to it having a major impact domestically, hence why it foresaw that it would disrupt normal operations. The data gave evidence of a planned reaction, as well as a haphazard one that replaced it later on. The consensus amongst respondents is that the first option that the firm sided with, had been to cut costs to match the diminished demand.

> *... at that moment when the state of emergency had been declared, schools shut and passanger travel halted, then we also had a notice of furlough that was given to all staff, that everyone's workload will decrease by 20 percent, so in practice the work week would have dropped down to four days.* (Interviewee 1)

Some point out that other ideas had been generated as well in an effort to keep people at work, but it is clear that at first, the pandemic and its effects on the market were perceived as a threat to the firm and idea generation was geared toward defending against it.

> *... there we just threw out whatever came to mind with which we could like keep the company afloat and above all keep everyone's jobs, and that was the exact idea there that no-one would have to be furloughed.* (Interviewee 7)

Some of the decision-makers also indicate, that hand sanitizer production was also amongst the alternatives from fairly early on, but it was not the favoured option, because the assumed synergies in terms of resources, more specifically the usability of Kyrö's alcohol, proved not to be correct. At this stage then, the cost-savings option was still favoured as the primary response. However, there is an apparent change in the cognitive frame that led to Kyrö making the decision to commit to the hand sanitizer alternative, which was that the events were initially perceived as a threat and later as an opportunity. This is well narrated by Interviewee 5:

> *Well then in like the care response two conversations emerged; the hand sanitizers and masks, and with the hand sanitizer we also saw some news from around the USA and UK, that some distilleries are considering making hand sanitizer. At that stage, we looked into that possibility and checked if we had the readiness or possibility in terms of regulation, to directly use those liquids that we currently had in circulation in production. Well, with the regulation at that moment we didn't, which then maybe held up the deliberation by a week in deciding whether we would undertake that venture or not. But then, around half-way through March, news came that bars would close and in just a few days, both the volume and tone of public discussion changed, and news began to come out that there's starting to be real shortages in hand sanitizer, and that prices were being raised on the store shelves. Well, this was then the point at which we thought that okay, here's a response available that is aligned with our values, a kind of opposite stance against this elitist extortion. And although we then had to build the whole supply chain again just for these raw materials, we decided that it would be worth it, because we still had the personnel, facilities, skills and at least some of the permits all ready.* (Interviewee 5)

When the market situation was perceived as a threat, the safer and more defensive response alternatives were favoured. On the contrary, when the market events were re-categorized as an opportunity, then this triggered a more creative shaping response. A clear activator of the cognitive re-categorization was when there were sudden changes in the market that conflicted with Kyrö's values.

> *... there's the certain kind of social responsibility from which all this originated because we wanted to serve the society with it by bringing a reasonably priced product to the market. When we saw that some were starting to cash in by exploiting people's anguish then this did not sit well within our mental landscape at all.* (Interviewee 1)

Interviewee 1 explicitly describes how the people at Kyrö have a certain united way of perceiving how the world should be and when there was a conflict with that, it sparked the firm into action. The fact that this value-conflict occurred in a completely different industry did not matter, which speaks to its power in provoking shaping behaviour, and more importantly the strength of the shared beliefs within the firm. The value-conflict

caused the re-categorization of the market events collectively throughout the firm, which is representative of a collective shift in cognitive frames.

Indeed, a shared cognitive frame within an organization requires that perspectives can be effectively aligned. When asked how the values became so central in guiding Kyrö's operations, Interviewee 5 explains that they have been identified as a useful tool for aligning perspectives to reach collective decisions and resolve possible conflicts.

> *... part of it is basically an active choice, because we want to in some way live a value-based life, and part of that is that we have to write down these sort of unwritten laws that guide our operations and work as a kind of common compass when there are differences in opinion, in strategy or tactics for example [...] that's how we somehow make sense of and look at the world, whether it be our own strategic or tactical operations, or then our partners, employees, and so on.* (Interviewee 5)

This statement is clear evidence of how decisions both are anchored in the values, and how values on the other hand drive the decisions into a uniform direction, which is consistent with the firm's identity.

Another contributing factor that enabled Kyrö to enter a completely new industry during the environmental jolt, was that the cognitive frames in terms of how they view themselves, were already well expanded. What is meant by the expansion of the cognitive frame, is that Kyrö has defined itself more widely than just through its core product of whisky, or even alcohol.

> *So, we as Kyrö have had the habit of doing other things as well aside from liquids. We collaborate quite a bit with other firms in non-beverage products. The hand-sanitizer is not an exception.* (Interviewee 5)

Interviewee 5 speaks of the experience that Kyrö already had in launching products other than just the traditional distillery produced goods. This point has come up multiple times during interviews, when participants have been asked how they see that the hand sanitizer and other non-beverage products fit strategically into the firm's product portfolio.

> *I think they fit, of course they always have to be really carefully considered in terms of why this product and is it really the kind of product that like- and I always return to our values, I think they're super important, and the kind of spirit that we generally have – so it just has to be carefully thought about, but I don't think there's any kind of limit that it couldn't be this. I think the fudge sauce is a good example, because in principle it doesn't have anything to do with- we like it so…* (Interviewee 3)

It is clear that because the firm defines itself and the identity of the brand through its values, then by that criteria the cognitive frame is expanded beyond rye whisky and other alcoholic beverages, which distilleries typically focus on manufacturing. This expanded cognitive frame through which the firm views itself, has been present from the very beginning, because as mentioned before, the brand has been a strategic tool to market the firm without marketing its products directly. The primary requirement that these products have, is that they have close fit with the identity of the firm, and thus its values.

> *… in Kyrö's case its already a matter of a kind of lifestyle brand type and I think the hand sanitizer kind of shows well how if our alcohol products are such that they are too expensive, or people just don't like to drink acohol or something, then they can still show their love towards the Kyrö brand and towards those values that we have […] they can show that love by for example buying a bottle of hand sanitizer, or the Kyrö Pärlans sauce or Kyrö Sugar Daddies honey. So it doesn't just have to be the alcohol, but instead more that Kyrö has a good spirit, Kyrö stands behind such and such values and I want to support those values, I want to support that spirit, that brand, and soon through that we can sell a lot of different products that still go into that same category of what we want to sell, and where we embody our values towards this world.* (Interviewee 3)

The fact that Kyrö already viewed itself as a firm that can make any product, as long as it is an embodiment of its brand identity and associated values, most likely made it possible that the hand sanitizer even emerged as a viable option. This contributes to shaping behaviour, in that the firm also has seen opportunities for influencing environments and markets that are outside of its own core industry.

4.2 Structural Agility

The second aggregate dimension that was identified at Kyrö is *structural agility*, which refers to the way that the firm is organized, from its structures to its routines, and how easily these can be altered as needed. Two antecedents to this type of agility were found, which were the ability to *activate improvisation, as needed* and subsequently to re-organize structures through *quick orchestration*.

4.2.1 Activation of improvisation, as needed

To successfully execute a fast initial response in an environmental jolt, the company must be able to improvise without the luxury of time that would be spent on coordinating activities. This is made possible by the ability to form agile teams with the right competencies to match the challenge at hand. At Kyrö, a small, independent team quickly and spontaneously assembles, and begins to improvise a possible response with the hand sanitizer project. Whilst showing the message logs to the researcher, one interviewee walks us through the sequence of events (names have been pseudonymized and the identifier of the interviewee omitted because of the identifiable nature of the content):

> *... here on the 12th of March at 6:43, and before this I have called our external collaborator and another person from within the firm, and at this stage we don't have any like official approval or anything, but instead we start to do the preparatory work, so I say "hi, Skunkworks is up" […] we then start to make the copies, examples and so forth, and then we're trying to figure out the regulatory requirements from existing hand sanitizers, and in this way we're starting to get an idea of what the etiquette could look like, practically within an hour. […] Sami asks a question about the back etiquette, I make the content for it and so on, Mika is continuously trying to figure out how we could make it, what are the requirements and where we could get the materials from, and so on. And at this stage we're starting to have an almost finished etiquette, so basically within 12 hours of starting. And at this stage then, practically on this Friday morning - so we got the idea on Thursday the 12th and on Friday morning we have a management meeting, where we're set to plan the kinds of changes we need to make, and we decide to pursue this hand sanitizer project […] at this*

stage I lead the project so that we've set up a separate channel for a team that has been gathered to develop the product.

The sequence of events here is a perfect instance of how the development of the hand sanitizer progressed very fast from a state of improvisation to one of orchestration. The participant refers to the project as 'Skunkworks', which describes an independent project conducted by a loose and separate small team. Only the competencies that are essential are gathered together and the team is figuring out issues as they go along without any formal structure.

There are several factors, which likely enable the success of this team, the first of which is that the inclusion of distinct skills created a clear division of responsibilities. This is important to ensure fast execution without overlapping work and unnecessary confusion. Another is that this team was in constant communication with each other, so as to keep themselves aligned and updated. A further notable thing is the speed at which this team is working and the sense that they are doing so with full commitment to the project even though it has not been approved yet. This may be because if the project is not approved, then having used the minimum time for this preparatory work is the best use of limited firm resources. On the other hand, if the project does get approved, then everything that has been done in preparation can be used because there was full commitment from the start. Moreover, there could also be an element of it being more likely that the project gets approved if everything has been done so that the product can be visualized by the management team and most questions answered.

The aforementioned factors enabled the small team to improvise successfully, but an important possible enabler of the formation of the team in the first place is prior experience, as well as knowledge of the distinct roles and competencies of others in the firm. This is suggested by the fact that there had been another occasion on which the same team had been formed to improvise with new product development.

... perhaps closest to the development of this hand sanitizer has been our 0,75 cl Lonkero, which is sold at the distillery. We needed some type of product that people could purchase with them, and we thought that we could make the kind of product that's packaged into a champagne bottle, and for which it's ok to pay a little more, and it would only be sold at the distillery. But then at that stage we

decided together that we don't really have resources to develop this, so then what we did was done with basically the same crew, so Mika, Sami, and I. We decided to make a kind of May Day -gift, which was basically the same product development process but done with as little resources as possible. So, what we did was we produced it at the Fat Lizard brewery in Espoo and made the etiquettes by printing them on ready designs, so there weren't really any other expenses formed except for work time, and in this way, we took it to a production amount of around 100 bottles and gave the product to people as May Day -gifts. And after people had gotten to test what it tasted like, it was decided that we're going to make a product out of this and then we began the actual product development process.

In this situation again, there had been a lack of some element that was needed to begin the usual orchestrated product development process, in this case it was resources, in the case of the hand sanitizer it was the mandate. This kick-started an improvisation mode, where the product was prototyped and tested with customers by the same small team, after which actual orchestration around the product begun with formal dedication of resources. Therefore, the fact that this team had improvised on another project, where the constraints were in place that had the same effect as with the hand sanitizer, but where they had more time to figure out the working style, probably made it easier to execute the same sort of effort once again.

Improvisation was also seen during the actual execution of the hand sanitizer project, because in a lot of way the firm was operating in firefighting mode, solving various problems as they came up. Interviewee 3 describes the project as chaotic:

I remember that most of the day we were continuously in meetings and spent the day in Teams- or Google Meet -meetings, and there was product development, there was the order process, there were sales, so we had to completely renew the old and wipe the table with what we had done before, and build a completely new thing, because the customers were for the most part different and the production process had differences for the most part, and we didn't have any customers when we started… (Interviewee 3)

This conveys how the firm had to be fast in abandoning old practices and begin the complete reconstruction of the firm to facilitate its entry to the new industry, but as time was scarce, they had to work chaotically and improvise for the most part because the firm had to learn as they went along without prior planning.

It was important here, that problems were solved collectively, because through mixing and matching various competencies, the firm could improvise in a way that allowed it to completely reconfigure its business activities.

> *I do really admire that incredible kind of drive, where we just believed in it, that okay no-one actually knows how this should be made, but one knows a little bit, the second a bit about something else, and the third then again about something else, and then being able to do it together and it becomes something tangible and true.* (Interviewee 6)

In a way, it is likely that if improvisation had not taken place collectively, then it would have been impossible to transform the firm because of the lack of organic formation of groups and structures, where the right competencies were in the right place at the right time. Everyone's collective focus on helping where they could to solve any issues that prevented the project from going forward, liberated people from the pre-defined roles and led to an instinctual execution of those tasks that best served the new business.

Infinite improvisation and chaos are also inefficient and tiring for a company, which meant that it had to quickly find ways of orchestrating. Here, communication and transparency were important, because they facilitated the coordination of that orchestration and the fixing of roles and routines in place. Yet there are also many other factors that supported Kyrö's quick transition to a more orchestrated process.

4.2.2 Quick orchestration

Kyrö was able to move from fast idea development and planning in an agile team, to effective execution to seize the opportunity. This was thanks to the way that the firm was able to orchestrate quickly into appropriate teams and realign structures to fit the hand sanitizer project. One source of such speed was identified in Kyrö's semi-structures, that is, the loose organization of the firm's structures and routines.

> *... in that forum we gathered together weekly, especially to focus on the well-being side […] it was just during this crisis-time, normally we just meet once a month.* (Interviewee 1)

One part that has made it possible for Kyrö to adapt and renew itself flexibly, is that it has some well-defined established practices, which are adjusted or re-defined as needed. In the above example given by Interviewee 1, they describe how old communication routines were increased in frequency, so that employee well-being could be tended to during the intensely stressful circumstances. Other similar instances were also brought up frequently, such as the weekly firm-level meetings or one-to-ones, which were mentioned by all interviewees and identified as set structural routines at the firm. During the environmental jolt, Kyrö kept these structures, but adjusted them to match the conditions in terms of frequency or nature. This demonstrates that loose structures, especially around communication, allowed the firm to quickly adapt learned skills and capabilities to the situation in a manner that would best serve its needs.

These semi-structures could have born out of the necessities of normal business environment, where they are needed to accommodate for creative processes and spontaneous opportunity seizing.

> *… then still in product development there's a kind of living process that usually does not just go in one direction, so quite often right at the very end we may transform the liquid's development path quite a lot actually. It's a kind of creative process in that sense, where we investigate the certain drink and then at some point decide that "okay, it'll be like this and like this", and then we're really critical. Sometimes at the very end we may decide that "no, actually let's not do it like this" […] so it could be that it's not the main development path that in the end ends up being the finished product.* (Interviewee 2)

In product development, there are certain decision gates, budgets, and deadlines, but the process itself is iterative and full of improvisation, which perfectly depicts the kinds of loose semi-structures that are in place and are balanced to achieve the best combination of efficiency and creativity. These structures keep the firm oriented and organized, but they are not so fixed that they could not be altered to match the state of improvisation within the firm, which is what creates the ability for quick orchestration.

Flexible role-boundaries also contribute to the semi-structures of the firm through role definition on one hand, but also flexibility and transferable competencies on the other.

> *At Kyrö we're encouraged a lot towards being multi-skilled, especially in the production side, so for example the distillery team can do the tasks of the whisky team and vice-versa, and likewise the packaging and logistics team can do other tasks at the distillery side. This hand sanitizer project really contributed to the development of multiple skills, so then when we had to pack the hand sanitizer, everyone basically learned the packaging and logistic side jobs, and even our restaurant staff and management crew were working there and working through the weekend at the packaging side.* (Interviewee 1)

Being able to carry out various tasks within the firm is a good risk management practice, but also has other advantages, such as increasing engagement with the firm through more thorough knowledge of the business and the building of closer relationships. However, in the environmental jolt, this was especially important, because it allowed people to deviate from their usual tasks and improvise. In the orchestration phase in turn, the loosely defined roles have meant that people have not attached their identity to their role but the firm as a whole, which means that they are able re-define their roles to include the new tasks.

On the contrary, if roles become too loosely defined, then this has also introduced problems within the firm.

> *… all the founders don't necessarily sort of respect the jobs of others, so they might in a way step on the toes of either the employees or then other founders.* (Interviewee 4)

Here, it is clear that especially with founders, who have an additional identity on top of their regular roles, the boundaries of their roles may become blurred, because after all they are responsible for the entire business. Thus, it is the semi-structures that permit the firm to change and remain flexible, but role definition is still needed to keep orchestration in place. However, periodic improvisation and deviation outside set roles is also beneficial in creating awareness of the diverse skills and competencies within the firm,

which are the considered as the firm orchestrates, i.e., re-structures itself to fit the new circumstances.

> *Well, they've (learnings) mostly come from this very kind of organic composition around things that just need to get done fast, and kind of what worked with that, and especially the people who could mould both their role and their own activities in different ways. We've tried to take them into account as these kinds of positive things when we've changed the roles and responsibility distributions of the new management system.* (Interviewee 5)

Clearly the awareness of different capabilities has served as a feedback-loop towards the orchestration of the firm and has led to roles being shaped so that they play to the strengths identified in each individual. In a way, this optimizes that capabilities of the firm for normal circumstances, through a mechanism of learning.

Learnings are also apparent in the evolution from the initial improvisatory response towards longer-term arrangements and permanent fixtures as a result of the environmental jolt.

> *At least we have a kind of crisis management team, […] so any time there's something, for example a critical situation in terms of the media, then the team gathers together to think about how we should react and who does what […] it came really close to that (start of the pandemic), so probably corona first and then this.* (Interviewee 7)

The above account describes a very fast orchestration in the formation of a new crisis management team, which has been set up as a consequence of the pandemic. As indicated, this orchestration took place very quickly, and is a demonstration of how learnings were applied already in the middle of the environmental jolt to cope with any further escalations. It is likely that capabilities like these greatly helped Kyrö to cope with various aspects of the crisis.

4.3 High Employee Engagement

In the first aggregate dimension, the values of the firm caused its behaviour externally, with the strategic, psychological, and operational concepts resulting in shaping behaviour.

The next aggregate dimension discusses how Kyrö's values guide the firm's activities internally, resulting in *high employee engagement*. This high-level of employee engagement in turn, is something that enables the firm to carry out the aspirations of its shaping behaviour and to cope with changes in its environment by harnessing the whole firm towards proactive adaptation.

4.3.1 Psychological safety

For entrepreneurial behaviour and learning to take place, and for people to remain engaged, the environment needs to be psychologically safe. It was found that at Kyrö, psychological safety is a result of high-quality relationships, that are created by the freedom to be oneself and affect-based trust between individuals. These are enabled by the culture of openness and communication, which are a part of the human-centric management culture at Kyrö. Not only that, but psychological safety was also found to be closely related to learning and entrepreneurial behaviour because of the perceived leader inclusiveness and attitude towards failure.

In an environment where people are encouraged to develop, entrepreneurially contribute to business and be daring, it is required that the environment also has a high tolerance for failure.

> *We try a lot of things if we don't have enough information about how it works, so we try a lot of things and at Kyrö failing is allowed, because that's the only way to learn and take those learnings to forward and to try and investigate how something works for us.* (Interviewee 1)

For people to try new things and therefore learn, they must know that negative consequences do not follow if they fail. The freedom and acceptance of failure creates an environment of psychological safety, where the perceived risk taken by the person is reduced, as they know that the culture is accepting and learning oriented. There is a profound understanding, that learning comes at the price of failure, and that good performance is directly related to that learning.

In the above statement by Interviewee 1, it is interesting how learnings and failures are talked of collectively, indicating that what everyone tries and learns is connected to the collective learning and development of the firm as a whole. Furthermore, it is explicitly

understood that failure is the only route to learning, meaning that if you are not failing then you are not operating according to the firm's principles. This is interesting, because it signals not only a tolerance for failure but in fact an encouragement towards it. It is also indicated, that not only does the firm learn new things and stop there, but then proceeds to learn how exactly the learnings can be harnessed at Kyrö specifically. This is indicative of a mentality of not settling for best practices but tailoring them into Kyrö-specific capabilities.

The sense of psychological safety and its relation to learning is further explicated by Interviewee 7:

> *We try to make workdays so that they're not just about grinding, although they always partly are but still that there's a good feeling in working together and coming to work, and I think a really big part of that is that no-one has to be scared of anything. You don't have to be scared of failure or if you don't know or won't learn something, because in a way we then figure it out together and move forward if these problems arise.* (Interviewee 7)

Again, the sense of a collective learning experience is brought out here, in describing how people help each other to learn and overcome failings, which in turn increases the communal and trusting spirit within the firm culture. Furthermore, Interviewee 7 explains that there is a relationship between psychological safety and the emotional experience within the firm, which in turn contributes to employee engagement. They describe how safety is a major enabler of the emotionally pleasant atmosphere within the firm, so that that coming to work and being with each other is enjoyable.

The collectiveness of the learning experience and psychological safety emphasize how psychological safety is a concept that relates to a group-level experience. In contrast, trust was also brought up as a contributing factor, which increases high-quality relationships and therefore has a major impact on psychological safety. When there is trust between people and relationships are strong, it allows for effective conflict resolution and brings confidence in raising difficult issues without judgement. Interviewee 4 explains that this kind of trust is also cultivated through peer-support during emotionally intense situations:

> *... there are a few relationships that based on a sort of greater trust, within the management team for example, which are then based on making peer support calls, so if it seems like someone is under a lot of burden then we may call and ask "how are you holding up? Is there something I can do to help?" So, this kind of- or I believe in kind of help-giving, help-seeking based trust building...* (Interviewee 4)

It is clear from this description, that there is an effort to build a higher-level of trust through authentic caring for one another. By helping others in the management team with their well-being and emotional side, affect-based trust is developed. This of course requires that there be cognition-based trust in place too, so that others can feel confident in off-loading tasks to one another, but it is affect-based trust that also signals that all kinds of emotions are allowed and can be shared. This creates high-quality relationships between individuals, which are based on trust and collectively create an atmosphere of psychological safety.

Another part of building authentic and trusting relationships is the freedom for each employee to be themselves, as described by Interviewee 7 below:

> *We take people as people and take into account each person's strengths and weaknesses individually and take people as people and try to go on together from there, so that everyone can be different and can be their own personalities, but still keeping the sort of common goal clearly in mind, so the purpose for doing this.* (Interviewee 7)

Above, Interviewee 7 describes how the people are united by the common mission of the firm but are allowed to be themselves and managed as individuals. This mentality bears resemblance with the sense of family that has been described by another respondent, where people are respected and accepted as themselves. That is, everyone can feel comfortable that they are accepted as who they are and that all are just people with their unique flaws. This emphasis on people as people, also suggests that there is an acceptance of a wide range of emotions that everyone feels, and the recognition that work is a part of life and should be an enjoyable one at that.

4.3.2 Human-centricity

The second theme that contributes to employee engagement is the human-centricity of the culture at Kyrö. Human centricity increases engagement because people feel a sense of belonging in the community. The values trusting and communal direct the internal culture of the firm into this direction and propels the firm to project that outwards into their environment. When asked to describe the dynamic in the top management team, Interviewee 1 describes:

> *Well as the main thing I would raise the openness and the sense of humor that we have included even in our firm values, so those are the most important, and also caring about people. Things are addressed straight away, so we don't look through our fingers in anything, so if it looks like there's beginning to be friction between some people then it's addressed right away, so we want to talk about things and be open. We care about them, both the staff and also the society outside of the firm.* (Interviewee 1)

Openness and honesty are valued so that negative feelings do not begin brewing in the firm. Perhaps this is due to the recognition that negative feelings can also infectiously spread, give rise to differing incentives and motives, and lead the firm away from its values of communality and trust. If the values cannot be maintained within the community of the firm, then it is very difficult to channel those outward. This participant clearly feels that there is genuine care for others present in the workplace and feels that humor is an important part of the dynamic of the team. What is described by Interviewee 1 is more like a well-managed friendship group than a traditional management team, where people joke and have fun, but also resolve conflicts and recognize that they naturally arise. Conflict resolution is necessary to keep relationships close and to maintain trust in each other.

A structure of low-hierarchy reduces the possible power distance that may hinder the formation of close relationships. That allows for an open and authentic development of relationships, where people genuinely enjoy each other's company and believe that there is an authentic concern for each other on all levels. Yet human-centricity does not come automatically, but also requires emotions to be actively managed by leaders.

> *I think that the most important thing is to be present and sort of keep a very close eye on reacting to people's changed (emotional) states really fast. You react when you see that someone is really tired, you react when you see that someone is becoming really agitated. So being present and reacting to those things, and often necessarily just the small things help in that situation. You can ask "hey how are you doing? Is everything okay?" This already gets you really far, which is quite often unbelievable even, that it doesn't take much apart from the person realizing that okay they care about me.* (Interviewee 7)

The formation of authentic relationships in normal conditions creates a foundation of authenticity in the culture of genuine care for each other within the firm. However, in the conditions of an environmental jolt where the circumstances are very stressful, leaders manage emotions more actively and it is well received and more effective because of that underlying foundation. This was confirmed by Interviewee 5 when asked how emotions were tracked and managed during the pandemic phase:

> *Well actually our normal practices helped quite well there, so of course every week we have a weekly meeting for the whole firm, our management meetings and so on, but in addition to this we have a strong one-to-one culture, so a lot of conversation between people, the frequency of which was then increased. Then for every day we introduced a joint half an hour for the firm, where I promised to be available and answer to anything (questions).* (Interviewee 5)

This shows how the openness and conversational nature of the culture creates closer relationships between people, which has been a conscious choice by the firm. To support the emotional challenges of the hectic work environment, more of these structures were introduced despite the extremely high workload of the firm. It shows support for the fact that the firm priority was not only its survival, but also the well-being of its employees, because the firm wanted not only to survive, but to survive and maintain itself as it was prior to the events. This is demonstrative of two things, first that there were also emotional semi-structures in place, which were tended to like other routines within the firm, and second that this had a significant impact in reducing the trauma experienced by the firm in this situation.

4.3.3 Entrepreneurial behaviour

A second-order theme of entrepreneurial behaviour was identified, which contributes to high employee engagement, because the employees of the firm take ownership of its direction and are dedicated to its mission. This type of behaviour is both deliberately driven and organically generated. The deliberately driven entrepreneurial behaviour arises first from employing individuals who have natural tendencies towards such behaviour. This is expressed by Interviewee 7 as follows:

> *Here's the thing, I think that you have to be a certain way in order to fit in here. You have to be very entrepreneurial and also a little nutty. In a way all of us are a little nutty in the sense that we're not afraid to say any crazy things out loud and sometimes we do daft things [laughs]… so in a way there are a lot of similarly spirited people working. So, I don't think my identity has changed, but I think that I've found the kind of place where my identity fits.* (Interviewee 7)

Kyrö keeps its community a certain way, promoting organic entrepreneurial behaviour through recruiting people who are both driven and quirky at the same time, i.e., have a demonstrated natural tendency for daring to make an impact and throw themselves into new and unconventional activities. These types of people have the same characteristics and types of values that Kyrö has, which means that they can become deeply engaged with the purpose of the firm, but also immediately have a shared value system with their colleagues. This in turn, strengthens the community spirit within the firm, which happens to be one of its values, but also keeps up an entrepreneurial momentum in the activities of the firm. However, when the decision is made to create a community of idea-rich, independent, and ownership-taking individuals, the firm can only work if people are given the opportunity to realize themselves. This is why it is also important that responsibility is distributed amongst everyone in the firm. This relationship between giving responsibility and taking it is described by Interviewee 1:

> *Well, it (entrepreneurial spirit) shows clearly and pretty much throughout the organization, so it's not limited just to the people who are entrepreneurs, so our founders, but it's really within each of us, because we're given quite a lot of responsibility and authority, which they (the employees) are ready to take as well, and these things are quite carefully screened for already in the recruiting*

phase when a new person is being brought in, so that they fit into our environment. (Interviewee 1)

There is a conscious and continuous top-down effort to create a collective sense of ownership and accountability for the future of the firm. This is done by handing out responsibility for the firm for everyone, so that people are able to become engaged with the business and exercise their entrepreneurial tendencies. When people feel like they can have an impact on the direction of the firm, and that they are responsible for what happens, they are less likely to complain and succumb to external forces, and more likely to instead fix the problems they see and attempt to influence outcomes. Interviewee 6 describes some of the concrete ways in which this responsibility distribution takes place:

Well, I think, if I compare to other organizations where I've worked, then the employees or like the whole organization is included in conversations a lot. We have a weekly meeting every week, where we go through things and there's a possibility to comment on them, in addition to which we've had different, like some townhall meetings and different meetings where it's possible to say if you've seen some opportunities, or to comment on things et cetera, so I think that's great. And then in Slack we of course actively exchange ideas on different channels, on some of which the whole organization is included, so I think that's great, but of course different functions have their own leaders who make decisions […] but there's maybe a kind of founder layer on top of that. (Interviewee 6)

The culture at Kyrö is very conversational, where the capabilities of the whole organization are activated by openly discussing issues, not placing emphasis on where ideas originate from. Making everyone responsible for the quality and activities of the firm creates engagement with various areas of the business. This was also apparent during the hand sanitizer project, where a firm-wide Slack channel was set up for everyone to generate ideas about how to save the firm and secure jobs. From the above data extract, it is also apparent that there are various forums and mediums through which people can get involved. This also came up in other interviews, which demonstrates that although it is recognized that people share the same traits, it is also taken into account that individuals are different and are more comfortable bringing up their ideas one-on-one rather than in front of the whole firm for example. In this way, it is possible to utilize the collective

talent of the whole firm, while accommodating for individual differences. Moreover, collecting input and ideas, and conversing about them in multiple forums makes it a frequent and normal activity within the firm, which in turn encourages people to act in an involved and engaged manner.

Aside from the deliberate actions that were taken to create entrepreneurial behaviour, a strong organic driver of it was also identified in the founder-led nature of the firm, or the 'founder-layer', as referred to by Interviewee 6. Although the data indicated that the founder-led quality of the firm is more a part of the external brand and story of the firm, it is apparent that five founders that are part of the operational activities of the firm, have a significant impact on the internal culture of the firm.

> *… it's perhaps a little challenging when there's five owners, all of whom are involved in the operative activities, or five founders, as they determine the pace, and that of course is quite difficult for a lot of people to understand that there's a difference between being a founder and…. when you kind of naturally give a bit more than you normally would, then it's easy to get sucked up in that.* (Interviewee 6)

It is clear here, that the founder presence creates a sort of infectious entrepreneurial spirit within the company, which is good in terms of ownership and the development mentality, but also challenging in terms of creating a climate of unhealthy over-commitment. Interviewee 6 also indicates that the number of founders could be more problematic than the fact that founders are present in the operational activities, perhaps because it sets an example on such a wide scale about the working style, and when so many set the pace of the firm, it could be very hard not to sync oneself with that pace.

> *… we talk about ourselves as a family, and that can sometimes also be quite complicated in the sense that we're not really a family in the literal sense of the word, but we're quite a tight community, which also brings a lot of challenges in the sense that sometimes our employees are so fully invested in this that it also easily creates these situations where people are kind of ready to give a bit too much even, and then get exhausted.* (Interviewee 3)

Many interviewees brought up the fact that there is a management challenge in keeping the employees of the firm involved and engaged with the business in a founder-like manner, while keeping their workloads manageable and communicating expectations with regards to a healthy work-life balance. The fact that the internal dialogue uses vocabulary like family, indicates that people are to an extent unconditionally engaged to the business, and as such willing to do whatever it takes. Perhaps this is most indicative of the tendency to then slip from a positive high energy emotional state to a negative one, and thus there is a recognized need to manage the community emotionally to keep the entrepreneurial spirit on a healthy level.

These three factors; entrepreneurial behaviour, human-centricity and psychological safety are all value-rooted and create the kind of culture where the people at Kyrö Distillery Company are highly engaged within the firm.

4.4 Resource Commitment

As a major factor in Kyrö Distillery's ability to successfully respond to the pandemic with the hand sanitizer pivot, was the absolute commitment of resources towards the project, despite the high degree of uncertainty around the operating environment. Without this aggregate dimension of *resource commitment*, it is very likely that the process would have failed as a consequence of the extremely competitive market environment. Here, two second-order themes were identified, which contributed toward the willingness to commit resources: *belief in the success of the project* and an *increased risk-appetite*.

4.4.1 Belief in success of project

Had the leadership of the firm not had belief in the success of the project, then it is very unlikely that they would have committed the firm's resources at the scale and intensity that they did. One likely explanation for this is that there was a strong underlying confidence in the success of the project, because of prior similar experiences.

> *... when the Napue win came in and everything blew up, there was a similar kind of atmosphere, when everything just blows up and ... we made possible out of the impossible.* (Interviewee 7)

In the past, Kyrö has faced situations where there has been a sudden turn of events that has had a significant impact on their business. One of these was when the firm's Napue Gin won an international award as the best gin for a gin & tonic, resulting in a massive increase in the demand for their product. In response to this opportunity, they invested in the business and worked very hard, and interviewees often drew comparison between that situation and the pandemic. Indeed, this too was an environmental jolt, albeit one that affected only Kyrö, not the entire global marketplace, but still, the internal effects in the response were the same. Therefore, it seems that a similar prior experience has had a positive effect on the outcomes this time around.

> *We've learned in all of this, being part of everything, that the timing is super important, so when we do what and who gets something out to market first to the awareness of the greater public, that's really really significant. For example, if you look at the Finnish alcohol field and the only way that you can really market your products to the masses is through winning some competition abroad and getting the publicity from that, then there's nothing else that anyone is even doing anymore, we were just the first who got the World's Best Gin for a Gin & Tonic -award, and even there were able to utilize that momentum. And now every other week someone has won some competition, but no-one cares anymore.* (Interviewee 3)

From the above data excerpts, it appears that prior experience has increased resource commitment in two ways. First, the successful outcome in the previous environmental jolt gave Kyrö confidence in thriving in such circumstances, which in turn fed the belief in the success of the project. Second, the concrete learnings highlighted here in terms of the importance of doing something first, meant that they had to believe in what they were doing despite taking the risk as the first-mover. In fact, during the Napue -win, the resultant jolt in their demand came as a complete surprise. In comparison, during the COVID-19 crisis, Kyrö began to shape the same circumstances intentionally by creating awareness of their product and thereby generating demand before they even knew how to develop it. This is a concrete example of applying prior experience to replicate conditions where the company could thrive. Both of these instances are ones, where there is an opportunity and a high demand for the product, although in the former it was organically generated and, in the latter, deliberately orchestrated.

The effects of an environmental jolt can be diverse, and it can be questioned whether it is possible to always identify an opportunity that generates demand at such a high level, and if not, then how strategically resilient could Kyrö be in that situation? Nonetheless, the high demand for the hand sanitizer definitely gave the necessary assurance that the project is worth investing in, in addition to which, the simultaneous decrease in demand of the firm's core products meant that there were slack resources available that could be utilized without significant opportunity costs. It seems therefore that effective opportunity identification and subsequent demand generation are borne from prior experience, which then fuels the belief for the project that is necessary for full resource commitment.

However, Interviewee 7 describes how the beliefs and emotions elicited by a prior experience can also have negative consequences:

> *… - the schedules can sometimes be such that we just proceed with a rapid sequence and then we forget to check if it's even possible… but somehow it also feels like we have the kind of crew there that we can even make the impossible into something possible, and then that I think is also a negative thing because we sometimes also feel a false sense of security in that "okay, this too will be successful at whatever the cost".* (Interviewee 7)

It is described above, that despite the higher sense of confidence being a positive factor in increasing commitment toward a project, it can also encourage the firm to do so even when it would not be rational. It is apparent that this kind of confidence can result in an over-optimistic perception of the situation, which was indicated in some literature as being detrimental to resilience, and instead a realistic perception of events should be favoured to avoid cognitive blind spots.

In this case, the ignorance of potential problems actually helped Kyrö move forward, because oversimplifying matters made it easier to rationalize to themselves that the pivot is bound to succeed and worth committing to. The firm believed in the internal fit that the hand sanitizer would have with its other operations, in terms of operational synergies. The perception of synergies initiated the line of thinking that the two industries were very similar.

> *If we think about the first signs of it (the pandemic), then it was probably at the beginning of March, a week before the announcement from the government about the lockdown, then that's where we already saw that hand sanitizer was being used a lot, and we thought that "well we're here sitting on thousands of litres of alcohol, couldn't we make it too?" […] and then I don't exactly remember how fast it then escalated from us thinking that we'll just make a small amount of it to making its own entire production line and building the production equipment for it…* (Interviewee 2)

There is a sort of oversimplification of the problem right from the start, where Kyrö assesses the development of the product and the realization of the project to be simple, because the core ingredient is the same and they have plenty of it available. However, after this, the assumptions of those synergies were proven incorrect on many fronts:

> *Then if we look at the production in general beyond the ingredients, then first Valvira (National Supervisory Authority for Welfare and Health) had instructions in place, stating that it's not allowed to make this hand sanitizer product in foodstuff production facilities, and we had planned to start bottling it in our alcohol bottling facility, so it wasn't possible. Since all our existing facilities are foodstuff facilities, we then started building a new production facility into an outdoor storage facility that's in the yard. We panelled the walls and pulled electrical works and pipes there. And then we also couldn't use our existing bottling technology that we have here, but had to start looking for a new machine…* (Interviewee 1)

A pattern was observed across the data, where initially when questioned about the motives for entering the hand sanitizer industry, the participants would explain that it was very simple and that they could utilize their existing facilities, equipment, people and of course the alcohol. However, systematically it would also come to light that none of these were in fact transferable, leading to sizeable investments in equipment and resources to build an entirely new facility and production line for the product. However, it seems that the belief in the synergies remains strong and this was perhaps necessary for the firm to believe in the project and justify the resource commitments made to the project.

4.4.2 Increased risk-appetite

Kyrö's response to the crisis had a two-fold purpose: first to keep the firm afloat and second to help societally. In both these goals, speed was of the essence, which meant taking unusually high risks in the challenging market conditions. Taking those risks in turn derived from the and mandated that the firm really believe in the success of the hand sanitizer project.

> *We just had to believe. Believe in this, that we believe in it (the product), it will sell, and we will make it, and if we don't do this (take the risk) then we won't get this done.* (Interviewee 7)

Interviewee 1 describes the risk-taking as the most challenging part of the project:

> *Maybe taking the risks back then, because you had to make big orders with the fear that if you don't then it may be that it's not available anymore in half- a little like a global material shortage with all suppliers, so you had to scrape up quite a lot of the material at once, and then because we had lost the basic alcohol business channel on the ground, we didn't have any income - and anyway we had given cost-savings targets and so on, that all investments should be frozen, and in the middle of that you had to just take those risks, that this will be successful.* (Interviewee 1)

The environmental jolt caused a very high demand for hand sanitizer, which was also reflected in the supplies and materials market of the goods needed to make it. To be able to participate in this market, Kyrö needed to buy ingredients and packaging supplies, which could only be secured by committing to large quantities or long-term contracts. This clearly meant that there was potential for major losses if the project were unsuccessful, but at the same time, to respond to the environmental jolt fast required risk-taking.

> *... in a way Kyrö's future kind of depended on how well we could make this work, and on the other hand we knew that there was a lot of demand for that product, and it was also something that was important for society, that the faster we could get it to market, then the better effect it would have on how people stay alive for example, so that also motivated us.* (Interviewee 4)

Indeed, the major risks were best minimized by fully committing to the project and thus ensuring that the product was put to market as fast as possible to capture the market demand. Without an increased appetite for risk, the firm would not have been able to secure the necessary components to make the project come together. Also, without a clear mandate and a decision to commit resources, Kyrö would not have been able to engage in fast decision-making. All this however required that there should be little doubt about the success of the pivot, and so this belief was strengthened with increased risk-taking. Ultimately, Interviewee 4 describes that the entire firm was at stake, as well as people's health within the society. The strong belief in the fact that the hand sanitizer pivot could make a major difference on both, was in a key position in driving resource commitment. Another was that Kyrö also created conditions for itself, in which the stakes were raised even further, meaning that failure was not an option.

> *... then we just made the product and started to put it out on the market and like started to think about how we can collect all the customer data about who wants it first of all, and then inform the customers at the same time as the product was still basically half-ready. And we collected lists, selling a product that wasn't even partially in the bottles yet and promised that deliveries will start in two weeks already, and through that we could build momentum to some extent, when people had purchased something that we didn't even have ready yet. But it's always about taking risks that the time span doesn't stretch too far, so we still don't let the consumer down…* (Interviewee 3)

Within five days of making the decision to go ahead with the project, the firm had informed the press about their intentions and opened a sign up that gathered around 7000 people. At the same time, marketing and sales were working on getting the word out to the public, all the while the product development was still a work in progress. Because of the Kyrö brand and the media interest around the firm, as well as the ethical position that they took in the crisis, they were able to generate massive momentum for the product in a way that created conditions where failure was simply not an option for the firm, because their reputation was on the line. Kyrö then got the product out to the consumers in mid-April, around a month after they had announced their entry to this industry. Had they not generated momentum and awareness for the product, it may not have been as successful

as it was, and on the contrary, they may not have proceeded to deliver it despite all the adversities and risks that had to be taken.

Therefore, the firm created a kind of self-fulfilling prophecy, where a way to finish the product and get it to market had to be found, whilst managing risks and expectations. They had amplified the risks voluntarily by making public promises and generating momentum, which is evidence of an increased risk-appetite. However, taking increased risk was also the way to increase the potential rewards of the project in case of success. Because failure could mean the end of Kyrö, they had no choice but to believe and commit fully to the pivot.

4.5 Psychological Commitment

The fifth and final aggregate dimension that emerged from the data was the *psychological commitment* that the entire firm had towards the hand sanitizer pivot. The state of crisis and uncertainty shadowed people not only at work but also at home, and as such there was an added challenge in harnessing and directing emotional energy towards the survival of the firm.

> *The context was that we were faced with a situation that was unprecedented to us as a firm, and unprecedented to all firms that operate in our value chain, all the way from the suppliers to the restaurants. And then it was that the situation had persisted for a couple of weeks already and no-one knew if it's coming to an end or what's at the other side of it. Is it the regression of the virus, is it that its impact will be- not small but controllable in terms of its health consequences, or is there a complete Armageddon at the other end? So, at that point people are naturally really worried about their own future, their families and so on, and all the firms are worried about their survival, so at that time when the situation was very pressurized overall, then people had to be able to, not only do their best, but completely new things as well in the middle of all that.* (Interviewee 5)

Managing the psychological and emotional side of the project was included within the three main priorities of the firm during that time; 1. Manage the well-being of Kyrö's people, 2. Find revenue-generating ways of helping clients and partners, 3. Make sure that the firm has some money. Critical to the success of the hand sanitizer pivot was the

ability to harness the negative emotions and use them as fuel for the project, as well as the promotion of those emotions that motivated the firm to do good together.

4.5.1 Togetherness through shared mission

Throughout the spring, as Kyrö was undertaking the hand sanitizer project in the middle of a global crisis, the atmosphere in the firm was chaotic and stressful, yet the huge workload that created this and kept everyone busy, was one way of managing the negative emotions that came from the uncertainty, as there simply was not time to stop and allocate attention to them. When asked to describe the atmosphere within the firm at that time, Interviewee 4 recalls:

> *... generally, I would say that on the one hand it was stress about what will happen to the firm. On the other hand, there was clear action where that uncertainty could be channeled, so that probably helped, especially at the distillery side, and elsewhere as well the atmosphere could be quite chaotic because there was such a limited amount of information available.* (Interviewee 4)

Channeling emotions into actions was one way of naturally managing them, because attention could not be allocated to those emotions. The reason it is suspected that Interviewee 4 refers to this being especially helpful at the distillery side, was perhaps because they would have had a more decreased workload had the firm not taken on the new project, which would have meant more room for fear and uncertainty to manifest itself. The need to act fast and work a lot meant that the emotions were felt with high-energy, which is the opposite of what it would have been with a decreased workload. Also, the novelty of the project and the prospect of making a difference also brought in positive emotions of excitement and alertness, instead of merely experiencing stress and tension.

Evidently, even more significant to the success of the project was not only that negative emotions could be channeled, but that positive emotions could be brought in in their stead. In fact, when speaking to the participants, the entire experience is perceived as being a very positive one in retrospect.

> *Well, I have said it here as well before, that even though it was a really stressful time and we had to work really long hours from morning until night on the phone, especially with the materials because of those challenges and so on, it was still maybe the best time that there's ever been.* (Interviewee 1)

The positive emotions can in part be attributed to the fact that the story was a huge success, but they were also deliberately evoked to create a collective sense of togetherness and encouragement. This came from the fact that everyone was united by the same fears, insecurities, and uncertainties.

> *… if I think about it from the production perspective, then all our jobs pretty much changed a lot, and at that point it was really positive that we did something together, where everyone was kind of out of their own comfort zone, which is when the togetherness was kind of emphasized.* (Interviewee 2)

People felt that they were not in the situation alone, which brought them comfort and propelled them to encourage each other. The significance of this collective support is confirmed by Interviewee 3:

> *… it clearly had the kind of effect that the organization was bound together, even though it was probably really tiring and exhausting as well, but when you also get the sort of support from the whole crew then you can do amazing things.* (Interviewee 3)

This harnessing of emotions to create a sense of togetherness or team spirit was identified as a contributor to the mentality of believing in being able to achieve anything together. The support and collective experience of the situation are factors, which quite naturally increase the spirit of togetherness, yet management also took deliberate measures to promote this and positive emotions more generally.

> *Overall, the kinds of things starting from the name of our channel, which was Kyrö United, and we made Slack channels to go along with it and so on, kind of promoting the sense of being together was really important. These like small moves, which mostly comes down to even just overcommunication.* (Interviewee 5)

Therefore, it was the decreased focus on the negative and increased promotion of the positive that got people to find the emotional strength to execute the project. This did not mean that negative emotions were not present or could not be expressed, but that they were counterbalanced by positive emotions and as such their detrimental effects could be minimized. In fact, the authenticity and encouragement for openness permitted the free and safe expression of negative and positive emotions during this time.

> *I'm also very open about that (tiredness), never trying to pretend that "okay this is super nice and I'm really cheery" even though I've just worked 15 hours a day for like three weeks. So again, the kind of openness is a really big factor there. And then they realize that "okay I don't have to pretend anything for him/her, because they're not pretending to be anything else", so I think that's something that in some way makes the teamwork the best.* (Interviewee 7)

It seems that the relationships at Kyrö are built on trust and authenticity, which means that people can express their emotions and trust that they can receive support from the rest of the team. Interviewee 7 describes how it is important to lead by example in order to cultivate this type of behaviour. Trust together with the psychological safety of the firm, means that emotional energy is not wasted on having to worry about the possible consequences of real self-expression, and that people are brought closer by being able to provide peer support in a challenging situation. Supporting others positively then encourages people to develop a more positive attitude in challenging circumstances within themselves too. Through an increased sense of togetherness, Kyrö collectively created a can-do attitude, in which emotions were channeled towards the hand sanitizer effort, and commitment to it was a way of managing fear and uncertainty.

4.5.2 Catalyst for perseverance

Throughout the project, Kyrö repeatedly faced adversities that made the project seem like an impossibility and would likely have caused many others to quit. In Kyrö's case, the firm demonstrated extreme determination, and when interviewed, it seemed that many participants had not even thought of the option to give up in the middle of the effort, and this even seemed like a very unfamiliar idea. An indication of the scope of the adversities is given below in the account of Interviewee 4:

> *... the biggest challenges actually came from outside of product development and had more to do with the sourcing, so where can we get the materials from, because at that point the ethanol that had been approved as a biocide was starting run out. We knew that we couldn't use our own ethanol for it, because it doesn't have the required approvals. We had to get bottles, they had also almost run out, caps had also run out, denaturants had run out and then the hypromellose, which we used to make it into a gel was also finished. So then, the first things we did at that point when we had gotten the smaller bottle size prepared for production, was that we started to bottle into canisters and deliver them to like hospitals and places like that in canisters.* (Interviewee 4)

The extreme demand conditions in the market for materials needed to make hand sanitizer created grave difficulties in the sourcing of materials and packaging solutions. Furthermore, there were other setbacks in terms of not being able to use the existing facilities or equipment. Despite all this, Kyrö was able to find a solution to all these issues through sheer determination, which no doubt required an extremely high level of psychological commitment to the cause.

> *We found them through determination. We had a few guys who just kept calling through these potential wholesales and others and then we found the ones that still had some stock and took quite large amounts. And then after we got them for the first kind of impulse, then we just continued that same job, so hunting down those wholesalers who still had the stuff and found them through that...* (Interviewee 2)

There were several factors that gave rise to this sort of perseverance, which stemmed from the two-fold purpose of the firm that was mentioned before: commercial potential and social impact.

> *Well, we saw a situation there that hand sanitizer had run out from everywhere, also from the hospitals, and after all it's a matter of quite a simple product, so we saw an opportunity to both keep our own employees at work, but then also to help these different entities to get the product.* (Interviewee 2)

Regardless of position, participants described the sense of a greater purpose and a duty to help as initial motivators, but also ones that were kept in mind throughout the project. The continuity of this motivator was more evident in those that worked with the greatest challenges in sourcing. This is perhaps because those that worked on the brand and marketing side perceived the situation more positively, due to the fact that demand came organically, and it was easier than normal to market the product.

The sense of social importance and how that surpassed negative emotions was described by Interviewee 6, who describes that their initial reaction to the project was negative.

> *... they called me one night and said, "what do you think about this hand sanitizer?" And so… it had been a really tough week and a tough day, and the whole team had been heavily worked and in kind of a distress, so then I said, "listen, we're so busy right now that we're seriously not going to start making some hand sanitizer on top of everything." Then I thought about it overnight and we talked about it the next day, and I said that, "well actually it's the kind of idea that's worth looking at a bit more closely", and from there on we started researching if we could make it. […] But the need for it was really huge, especially in the critical areas, so we thought that "we will try this, we have all the possibilities to make it".* (Interviewee 6)

It is clear that Interviewee 6 had an emotional reaction to the matter, but after rational consideration they changed their mind. It also seems that the final decision that initiated the action stemmed from the sense that Kyrö needs to answer to the societal need if they have the opportunity to do so.

Interviewee 7 also describes this sense of greater purpose as something that was at the root of the Kyrö community's determination to push on.

> *Well, I would say that all of us here are united by a sort of mild craziness. It's that we believe that something impossible can become possible. That we just push on and do it together, so there's somehow the kind of feeling that we're actually doing something really important, that making spirits is fun but in that case, it was about people's lives and the whole societal perspective, and that was what made us push on.* (Interviewee 7)

The united mission to help and make a positive impact kept it in mind that what they were doing was of greater importance than they themselves, and this created the strength and determination needed to make the project successful. Not only that, but the motivation to keep people at work was a great source of perseverance particularly at the management level.

> *It is quite intense to think that there are far over 30 employees, so it does make you think that "wait a minute, with these moves we're impacting everyone's lives, including our own", and we had these collective layoffs announced that everyone will be furloughed during a certain period, so it was really fantastic that we were able to avoid these by getting work there…* (Interviewee 3)

Therefore, it could clearly be observed in data that a higher purpose that was shared collectively and present on an individual level, created a strong determination throughout the firm to realize the project and make the pivot work despite whatever adversities Kyrö was faced with. The fact that this same feel was mentioned as having been present during the Napue -win, is indication that it is a special state within the firm, presenting itself in distinct circumstances.

4.6 Aggregate Model of Strategic Resilience

To form a general view of strategic resilience in the context of an environmental jolt, an aggregate model of the discovered aggregate dimensions was constructed, as displayed in Figure 9.

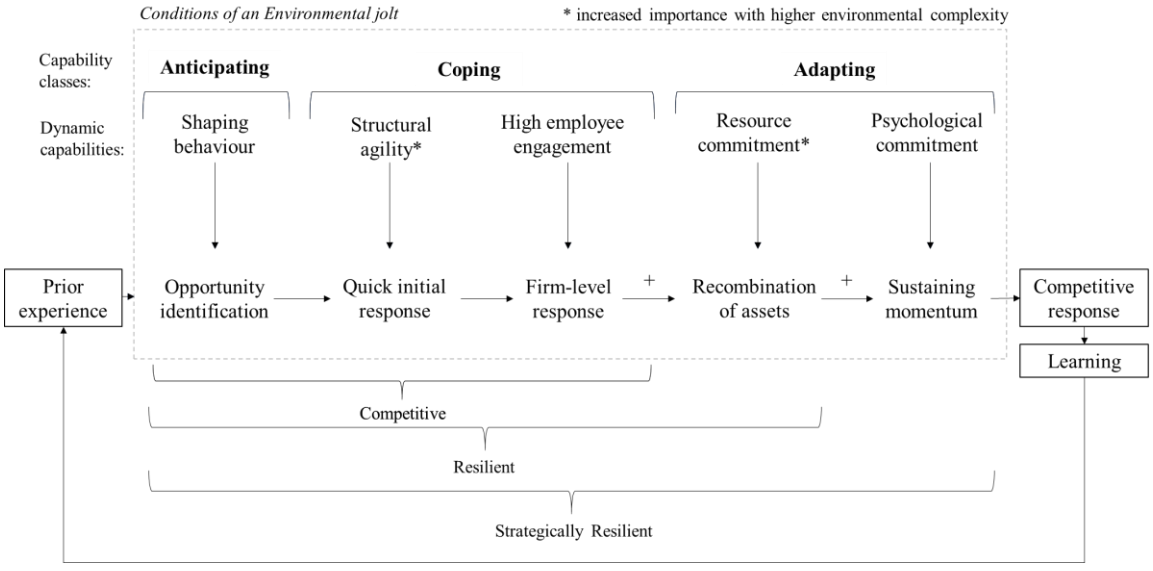

Figure 9 *An aggregate model of strategic resilience during an environmental jolt*

Anticipating capabilities are those that allow a firm to take proactive action fast in an environmental jolt, by observing and identifying critical developments within the firm's operating environment (Duchek, 2020). Kyrö did this by observing their declining demand simultaneously with the steep increase in hand sanitizer prices and the aggressive behaviour of the manufacturers in the market. *Shaping behaviour* was identified as the key dynamic capability under this capability cluster and embodies the proactive opportunity-seeking behaviour that is routinely exercised by the firm regardless of the environmental context. This dynamic capability allows for the efficient identification of emerging threats and opportunities in the operating environment.

Coping capabilities are those that are used to respond to the anticipated change (Duchek, 2020). After Kyrö was able to classify the events in the hand sanitizer market as an opportunity, it responded quickly by developing a prototype of its own hand sanitizer product, and subsequently creating a firm-wide project in creating and launching it. In this capability cluster, two dynamic capabilities were found: *structural agility* and *high employee engagement*. Structural agility allows for improvisation and quick orchestration, which lead to a fast initial response in product development, and also facilitates bricolage, problem solving, and learning. It was found that structural agility is also important in other environmental conditions, but that its importance increases in tandem with environmental complexity and volatility. This is because in an environment of fast-paced change, an organization must also be quicker and thus more agile in responding to it.

High employee engagement enables a firm to progress from an initial response to a firm-level response, where employees outside of the top management team or the initial project team are onboarded to seize the new opportunity. A high-level of engagement is something that elicits a sense of duty and dedication toward the firm because a threat toward the firm is felt as identity-threating to the individuals themselves. In Kyrö's case, it was apparent that high-employee engagement in normal circumstances led to a high-level of ownership and a mentality of constant development. Furthermore, the founders create an entrepreneurial drive within the firm through emotional contagion, which supports Teece's (2012) view that individuals play a larger role in the development of dynamic capabilities in smaller firms. During the environmental jolt, this served as a

prerequisite for the effective management of emotions, bricolage, and a higher-level dynamic capability of psychological commitment.

In the adapting phase, the dynamic capabilities of *resource commitment* and *psychological commitment* were identified. The adapting capabilities are ones that allow change to take place in the firm so that it can transform to align with its new reality. Not only that, but it is also the ability to learn and integrate those learnings into the future (Duchek, 2020). Resource commitment and psychological commitment were critical success factors in Kyrö's strategically resilient response. The extremity of the market conditions, its uncertainty, and the threat to the survival of the firm meant that resource commitments were characterized by high-risks, but were made regardless, fuelled by a belief in the success of the pivot. This is evidence toward the discussion of weather a positive or a realistic perception of events is more beneficial for resilience. In this case, the absolutely positive framing of the situation was a key enabler in committing whatever resources necessary, which would not have occurred had Kyrö perceived the situation realistically with all the adversities it faced. Thereby, this study supports the position of Mallak (1998) over Weick (1993), Coutu (2002), Vogus and Sutcliffe (2007).

In case of pursuing adaptation, failure to commit to the process will result in a haphazard response where the firm neither adapts nor absorbs. Therefore, once the firm has been oriented toward seizing the identified opportunity, assets must be re-combined to support this effort despite high-risks. This is a result of the dynamic capability of resource commitment. This, however, is easier if the firm has slack-resources available. Like structural agility, resource commitment grows in importance with the complexity of the environment, because failure to do so will inhibit adaptation efforts and a fast response. On the contrary, this dynamic capability must be coupled with those of the other capability classes in order to be effective, but it is with this capability that a firm can reach operational resilience in an environmental jolt.

To reach strategic resilience, a firm must also have the dynamic capability of psychological commitment, which builds on top of the prior four dynamic capabilities. In Kyrö's case, there were many adversities, uncertainties, and difficulties in capturing the opportunity in the hand sanitizer market. A complete re-orientation of a firm in general is exhausting and when this is executed with extreme speed, then it requires perseverance and a collective direction of emotional energy to complete the adaption process. Integral

to this is the management and leverage of emotions, which is enabled by the underlying high-level of employee engagement. These five dynamic capabilities together enable a strategically resilient competitive response, and the learnings from the entire process are then integrated into the dynamic capabilities to improve those capabilities for the next environmental jolt.

As mentioned, shaping behaviour, structural agility, and high-employee engagement are not only the identified dynamic capabilities in the anticipating and coping phases, but also exercised routinely in other environmental conditions. Though they are most effective when in use together, they also bring notable benefits even if they are present alone. Thus, these dynamic capabilities are more universal in their application and non-cumulative, all of which make a firm more competitive. In contrast, the dynamic capabilities identified in the adapting phase are cumulative, as in they build on top of the capabilities of the prior phases and are critical in reaching strategic resilience. Therefore, this study supports the assertion by Winnard et al. (2014) in affirming that it is in fact adaptive capacity that is the difference between operationally and strategically resilient organizations. More specifically, it is psychological commitment that is the key to a competitive response in the face of an environmental jolt.

5 DISCUSSION

In the previous section, it was found that there are five dynamic capabilities, which result in a strategically resilient response in an environmental jolt. These are shaping behaviour, structural agility, high employee engagement, resource commitment, and psychological commitment. This finding answers the first research question of this study and will be discussed in this section in light of prior literature in the field. Additionally, the second research question will be addressed in more detail, as the emotional microfoundations that affected the anticipating, coping, and adapting capabilities are discussed.

5.1 Adaptive Capacity

In much of the literature on strategic resilience, it had previously been reasoned that to advance from operational resilience to strategic resilience, an organization had to have adaptive capacity (Bhamra, et al, 2011; Lengnick-Hall & Beck, 2011; Winnard et al., 2014). This study found strong support for this perspective because it was the dynamic capabilities related to the adapting stage, which allowed the firm to proceed beyond organizational resilience to strategic resilience. However, what has been less clear in past literature, is that the sequential nature of the resilience stages also means that the dynamic capabilities of each stage build on each other. Thus, the adaptive capabilities are required for strategic resilience to be achieved, but without strong dynamic capabilities in the anticipating and coping capability classes, it is not possible to create superior adapting capabilities.

It was found that there is in fact a difference in nature between the dynamic capabilities exercised in a less complex environment, and those used in an environmental jolt. With sensing, seizing, and reconfiguring capability classes, the position of Teece et al. (2016) has been that each capability class is engaged with continuously or semi-continuously, but not necessarily sequentially. This study found, that anticipating capabilities are engaged with continuously, and are as such the closest to the sensing capabilities that are applied in normal conditions. This makes perfect sense, because the firm must continuously monitor its environment to be able to identify opportunities and threats, regardless of circumstances.

Coping capabilities then, are semi-continuous, because they are capabilities that are similar to seizing, hence why they can be used in various environmental contexts. Despite

their continuous presence in the background, structural agility and high employee engagement become active dynamic capabilities only when events are triggered. In the same way, seizing capabilities, which likely are different to those identified in this context, are used to create new business models, products, and services, when opportunities are identified. The close resemblance and likely overlap between sensing and anticipating capabilities, and seizing and coping capabilities, means that these are applicable in various environmental contexts, and as such it was also identified that these capabilities are also in use during the normal operating context.

It is in the adapting capability class, where the biggest difference is apparent, as the dynamic capabilities that were found here, are ones that are not typically used in the transforming process in a normal environment, at least not to the extent of even being classified as dynamic capabilities. Though engagement with resource commitment is somewhat continuous throughout environmental contexts, the magnitude of its importance is unique in an environmental jolt. Moreover, psychological commitment is only exercised in an environmental jolt, and thus this capability only experiences very temporary engagement in comparison to the rest. It is this dynamic capability and its temporary nature that makes the difference between an operationally resilient organization and a strategically resilient organization. No such capability has previously been identified in sensing, seizing, or transforming capability classes.

Furthermore, once the conditions of an environmental jolt begin, the anticipating, coping, and adapting capabilities are highly sequential, precisely because they build on each other as explained before. This is in contradiction to sensing, seizing, and transforming, which operate in flux and are not necessarily used sequentially. Here however, the sequential nature was vital in order to activate the adapting capability class.

The findings of this study indicate that some capabilities identified in resilience literature are in fact crucial in reaching strategic resilience, though the sequential nature of these capabilities implies that they are interdependent and have strong cumulative effects. Some of these include improvisation, slack resources, structures, and organizational routines.

Improvisation, or bricolage, has been associated with resilience by several researchers (Weick, 1993; Mallak, 1998; Coutu, 2002). It has been said that it is especially important because the organization and its individuals face novel problems and must respond

creatively to solve them. Additionally, as organizational structures decompose, people must be able to shape their roles to fit the situation and get the job done. This study found strong support for the importance of bricolage. It was apparent on a team level, where a small team broke away to develop a solution to a novel identity, thus improvising outside of the set organizational structure. Also, improvisation occurred once the whole firm had to re-orchestrate, because everyone was faced with novel tasks and were operating in a so-called fire-fighting mode, where everything had to be learned on-the-go and continuously arising problems creatively solved. Therefore, it could be seen that improvisation needed to take place on an individual level, so that it could occur on an organizational level. However, this ability was only one element that enabled structural agility, and though crucial, it had to be coupled with other practices, such as frequent communication, effective coordination, and flexibility in structures and role boundaries.

Slack resources were also found to be important, as indicated in prior literature on resilience and environmental jolts (Meyer, 1982; Lengnick-Hall & Beck, 2005). Slack resources have been frequently associated with the absorptive capacity of a firm, and thus it builds operational resilience, but does not propel the firm toward proactive response strategies. In this study, it was found that internal slack resources were significant enablers of a strategically resilient response, where the slack primarily came from the dramatic fall in demand for the usual products of the firm. Lengnick-Hall and Beck (2005) had theorized that external resources are key to strategic resilience, thus broad resource networks need to be available, but this study found no evidence of the necessity for such capabilities. On the contrary, social capital in terms of goodwill and strong external relations were found to be a significant enabler of the competitive response.

Literature on strategic resilience has also discussed the capability of a firm to respond to events without trauma (Winnard et al., 2014). In this context, it has been claimed that trauma undermines competitive advantage, yet this concept has not been discussed in the literature on dynamic capabilities. Likewise, though this research identified that the event had caused trauma that manifested itself in the form of stress, exhaustion, and emotional strain, the positive outcome of successful adaptation largely mitigated this issue. Of course, the trauma has to be internally managed, but as this study found, it presents no threat to the competitive advantage of the response if strong adapting capabilities are in place.

5.2 Importance of Values

There has been strong evidence in the literature on both individual and organizational resilience, that ideology, meaning, and values play a part in a crisis situation (Meyer, 1982; Horne III & Orr, 1998; Mallak, 1999; Coutu, 2002). It has been reasoned that meaning gives people hope of a better future, and that meaning is instilled through shared values, which allow the organization to interpret events in a uniform manner. In other literature, meaning has been more strongly associated with work satisfaction, passion, and engagement (May et al., 2004). This found strong elements that tie together various aspects of the importance and role of meaning, and its connection to values.

As found in prior research, it was confirmed that values were indeed a means of instilling purpose and the sense of purpose in turn was significant, not for hope, but for motivation despite the possibility of failure. It was the ideological position of the firm that enabled all members of it to collectively interpret the environmental events in the same way. As proposed by Lengnick-Hall and Beck (2005), a strong ideological identity was indeed what lie at the heart of decision-making, in a sense that it anchored perceptions of the situation and served as a compass in turbulent times. However, this strong ideological identity span further than what was hypothesized based on the literature review and was a backbone for action throughout all of the identified dynamic capabilities.

Throughout dynamic capabilities literature, it has been stressed that a firm's strategy must be congruent with its dynamic capabilities (Teece et al., 2016). Literature though seems to assume that this is a simple endeavour, for concrete actions on how this should be achieved are seldom given. This research suggests that values can act as a glue between strategy and dynamic capabilities, as it then naturally binds strategic moves and long-term objectives in a grounded ideological identity. For values to be fostered though, it was confirmed that they should be a strong part of the organizational culture, and such that organizational values naturally overlap with the values of individuals.

Resilience literature has been indecisive about the significance of optimism in perceiving environmental events. Coutu (2002) and Weick (1993) argued for a realistic perception of events, whereas Mallak (1998) for the positive and optimistic framing of adverse circumstances. Here it was found that what was most important was the congruence in the collective perception of events. Some lacked belief in the project, whilst others were

over optimistic, but as long as the perception of events was in line with the firm values, people had a collective sense of what they had to do and why, thus giving rise to resilience. Nevertheless, the results indicate that a positive perception of events was more decisive because the firm blindly held onto a misguided belief in the synergies between their established operations and the new opportunity, despite these assumptions being proven wrong repeatedly. Had they assumed a more realistic perception of events they may have decided not to pursue the opportunity after all. Thus, the findings lean more towards the position of Mallak (1998).

Rice (2006) has suggested that values are also a source of creativity. This remains rather inconclusive, because the findings here would indicate this to be true, but only because the values explicitly included daring and challenging behaviour, which naturally drives the firm to look for more creative solutions. This thus drives behaviour on a collective level. On the other hand, Rice (2006) had meant that the values of individuals guide people toward being more creative depending on if they have strong self-direction values or strong conformity and power values. It could be the case here, that the firm-level values bias them into hiring individuals with strong self-direction values, so as to reach the level of value fit that was pointed to before. Therefore, it is difficult to determine if creative behaviour would take place in the absence of organizational values that direct them to this direction. For this to be studied further, it may be useful to look at individual role performance in this same context.

5.3 Role of the Individual and the Collective

Both dynamic capabilities and strategic resilience literature discussed the role of individuals versus the role of the organization collectively, with neither reaching agreement on what capabilities and skills are most significant in each level and to what extent. That is, do dynamic capabilities arise out of the exceptional capabilities possessed by individuals, or do they stem from the interactions between individuals? Similarly, is a resilient organization merely made up of resilient individuals?

Here it was found that indeed, Teece's (2012) proposition held true in that at least in this smaller organization, the individuals played a significant role in the capabilities found. For example, the management of emotions was heavily dependent on a few individuals who assumed responsibility for it. The same went for product development and the

leverage of personal, external relationships to secure resources. This has the implication that hiring the right people can significantly boost an organization's capabilities, but that those individuals need to be given the appropriate room to operate and exercise the capabilities for benefits to be harnessed. At the same time, depending on individuals for significant capabilities makes the organization vulnerable, which would suggest that effective mechanisms for creating knowledge-sharing within the organization is important.

It has also been suggested that in circumstances of higher uncertainty, a more entrepreneurial management style is required (Schein, 1983; Teece et al., 2016; Kurtz & Varvakis, 2016). The effects of an entrepreneurial drive were found here, but also more specific conclusions could be drawn than has previously been done in associated literature. It was certainly true that the entrepreneurial capabilities in founders is in a key position for creating innovation and driving transformation, but even more importantly, the collective ripple effects were extremely important in creating coping capabilities. The fact that entrepreneurship also includes a type of high-energy emotion, means that it is also contagious throughout the organization, leading to higher employee engagement. Furthermore, the distribution of responsibilities, i.e. participative leadership, leads to a higher sense of ownership and encourages bricolage throughout the organization.

Likewise, in some other areas, it was found that individual-level capabilities were important, but that emotional outcomes of those capabilities were in a key position to create mounting effects that allowed those capabilities to also be exercised on a collective level. It was then the collective level of dynamic capability execution, which led to successful strategic resilience.

One example of such a case was learning. Prior learning serves as input to the dynamic strategic resilience capabilities, but in this studied case, only a small minority within the firm had experience from an environmental jolt before. Since the firm had since grown and its resource-based changed, this prior knowledge was also not directly applicable, nor was it consciously applied throughout. It was known from prior circumstances, that the speed of reaction was extremely important, and thus this knowledge had a clear impact on decision-making. Still, the most important aspect of prior experience was the mental attitude and emotional drive, which was embodied in those that had experience a similar situation before. This emotional sensation, primarily the psychological commitment,

which a small group had, was contagious and when it penetrated the firm on a collective level, it created a sense of togetherness and the perseverance needed to adapt successfully. Not everyone shared this mentality on an individual level, but the prior experience of a few was enough to create it in the majority. Similarly, it is now felt that as everyone has this experience, collective learning has taken place and it is more likely that psychological commitment can also be realized in the next environmental jolt. This aspect of learning is not one that prior literature has recognized, though emotional contagion has been widely addressed.

5.4 Emotional Microfoundations

This study indicates that the impact of emotional microfoundations is profound in all three capability classes. To discuss this in the context of the research question, each will be discussed in turn.

Within the anticipation capability class, it was found that emotional dimensions were most strongly coupled with the value system of the firm and the perceptions of the environmental events. When events were perceived as threats, it resulted in defensive strategic moves, but a shift to perceiving it in terms of opportunities, mediated by the firm's values, led to proactive strategic moves. The mediation by values was so effective because it struck an emotional chord and hence nudged the firm into action. Therefore, it was perhaps the values, which took emotional precedent over negative emotions, thereby down-regulating them and instead up-regulating a sense of duty. This is a new insight that has not been identified in prior literature, though the mechanisms of emotional regulation have been discussed by Healey and Hodgkinson (2017). Values therefore are a concrete tool with which such regulation can be exercised.

In regular environments, where shaping behaviour also occurs, it was observed that the values are used as a tool to align perspectives and promote certain behaviours, which is in line with the perspective that dynamic capabilities are borne out of routines. This means, that the firm routinely promotes an emotional climate through its values, and as such, a contrast with those values in the environment semi-automatically aligned perspectives. This indicates the flow of triggering cues both ways, where the proactive enforcement of emotions through values also causes a reaction when those values are threatened on an emotional level externally.

Within coping capabilities, emotional microfoundations were even more crucial, as they lay ground for adapting capabilities. Here, particularly emotional aperture in leadership, psychological safety, and a culture of companionate love were seen to enable improvisation, employee engagement, and learning. The last two in particular, were ones that are embedded in the emotional culture and the routines of the firm, whereas emotional aperture was something that was specifically demonstrated during the environmental jolt.

Emotional aperture was exercised by leadership, when new practices were included to take into account the various collective emotions that were brought about by the crisis. This was a conscious decision to up-regulate a sense of togetherness, and to down-regulate negative high-energy emotions. Furthermore, individual team leads took efforts to identify different emotional cues in their team members, so that they could be addressed quickly for the well-being of the individual and before it had a chance to cultivate in others. This in fact, is a characteristic that is embedded in normal management practices, which means that it is a routine that was operated at a higher level during the time of higher emotional intensity. This was a significant microfoundation that was found in regard to coping capabilities.

The emotional implications of culture were at the heart of high employee engagement and confirm the findings of Norris et al. (2008) and Mansour et al. (2019). This culture is one that most fits companionate love, where genuine care, compassion, and affection for other is present in the workplace. Not only that, this study suggests that when that culture is also cultivated outside of the firm through the values, it creates proactive behaviour that prompts the organization to shape its environment. Companionate love creates high-quality relationships, in which emotional expression is free and varied, and where people are willing to fight for the survival of the firm and display more resilience, because they also genuinely care for it and one another. Furthermore, companionate love gives rise to affective-based trust, which leads to citizenship behaviour. This was found to manifest itself as an increased willingness to learn, improvise, and perform tasks even without full knowledge or belief in its purpose.

In turn, psychological safety was confirmed as a major antecedent of dynamic coping capabilities, because it creates an environment that much like affective-based trust, encourages people to learn despite the risk of failure. It also allows for the free expression of one-self, which means that it is also easier for management to pick up on emotional

cues. Not only that, but it is also significant in creating a climate where employees are able to speak up and generate ideas, which increases employee engagement with the firm. In short, emotional microfoundations of coping capabilities were found to have a sizeable effect on outcomes in an environmental jolt. They are rooted in long-term organizational routines and its culture, which means that they have a lot of potential for creating a sustained competitive advantage.

Adapting capabilities also had strong emotional microfoundational roots. However, these are largely built on those that are present in the prior capability classes. For instance, psychological commitment cannot be reached without high employee engagement, and resource commitment is unattainable without high-quality relationships. In psychological commitment, what was distinct was the collective channelling of negative emotions into the transformation effort, all the while the positive collective experience and togetherness were deliberately and inadvertently promoted. It was the high-quality relationships, which gave way to a network of peer support and thus the carrying force of collective emotion drove the firm forward.

Because psychological commitment has such strong emotional roots and required a collective emotional effort, it can only be achieved by truly strategically resilient organizations. Ones with weak emotional microfoundations in anticipating and coping capabilities, will be unable to respond in a strategically resilient manner. Consequently, this study presents strong evidence that emotional microfoundations affect the anticipating, coping, and adapting capabilities in a multitude of ways, and are critical for strategic resilience.

6 CONCLUSION

In 2020, the world was struck by the coronavirus pandemic, which infected millions worldwide and caused a crisis in global markets. Firms across countries and industries were faced with an environmental jolt, a sudden, unprecedented, and temporary crisis that threatened their survival (Meyer, 1982). In the face of such dramatic circumstances, it became apparent that though the conditions were the same for all businesses, the reactions were not so, and some were able to turn the crisis into an opportunity, whilst others facing the same adversities would never recover.

Resilience literature is relevant to many fields, but it has received surprisingly little attention in terms of organizational science outside of high-reliability organizations performing critical functions. Still, the degree of resilience is evidently a source of heterogenous firm performance in an environmental jolt. In fact, prior literature has proposed that strategic resilience may be at the heart of a firm's sustainable competitive advantage, with this term referring to the ability to turn adversity into opportunity and emerging with a superior performance (Lengnick-Hall & Beck, 2003; Burnard & Bhamra, 2011).

Conversely, the dynamic capabilities perspective has been used to explain why some firms become more competitive than others. The dynamic capabilities framework developed by Teece (1997) has its roots in the resource-based view of the firm but was developed specifically to explain firm adaptation in various environmental conditions. It is therefore interesting that scholars have largely ignored the study of dynamic capabilities in the context of an environmental jolt. Moreover, if dynamic capabilities lie at the root of heterogenous performance, then they must also be the antecedent of superior resilience capabilities, yet the link between strategic resilience and dynamic capabilities has also been little researched. This is the theoretical gap addressed by the first research question of this study.

Dynamic capabilities arise out of firm-specific microfoundations, which can be categorized into individual, process, and structural characteristics, as well as their interactions (Felin et a., 2012). However, some microfoundations have also received disproportionate attention in literature, as emotional microfoundations have not been extensively investigated. Though Healey & Hodgkinson (2017) have brought more

attention to this area, its significance reaches a whole new level of magnitude when applied to the context of an emotionally intense crisis. Therefore, the second research question of this study set out to discover the impact of emotional microfoundations on the dynamic capabilities exercised in an environmental jolt.

Answering the above questions is important, because it brings new knowledge about the capabilities that firms proficient in creating a competitive advantage when faced with adversity have. Developing such capabilities can save a firm entirely and even allow it to become a market leader through detecting and capitalizing on subtle opportunities. Resilience improving mechanisms and capabilities are important for organizations societally, as resilient businesses also create resilient economies, which can withstand stronger market turbulence.

6.1 Answering Research Questions

To answer the research questions of this thesis, a case study was conducted of a firm that had demonstrated strategic resilience when threatened by the global pandemic. Kyrö Distillery Company, a founder-led firm with rye whisky its core product, pivoted into making hand sanitizer, for which there was major demand and societal need. Not only was Kyrö able to identify this opportunity, but it was also able to execute it at such a high level, that the company rose above many peers who had seized the same opportunity. The outcomes included the cancellation of planned furloughs, extremely wide reach in brand exposure, a new sales tool, a permanent addition to the product portfolio, a heightened internal spirit, as well as revenues that potentially saved the firm and made an impact to charitable causes, amongst others.

As a result of this study, the first research question was answered through the identification of five distinct dynamic capabilities for strategic resilience. These five dynamic capabilities are grouped under anticipating, coping, and adapting capability classes, according to resilience stages (Duchek, 2020). It was identified that *shaping behaviour* is a dynamic capability that belongs to the anticipating class of dynamic capabilities. This is because it drives competitive advantage through a continuous search for opportunities, which is both proactive and entrepreneurial. The output of this is that opportunities can be identified rapidly when an organization is faced with a threat.

The coping capability class includes the dynamic capabilities of *structural agility* and *high employee engagement*. Structural agility leads to a fast initial response in seizing the identified opportunity, and as the importance of a fast response increases with environmental uncertainty, then so does the importance of the structural agility capability. High employee engagement on the other hand, is what enables the orchestration of action on a whole-firm level, which must take place so that the firm can wholly adapt to its novel environmental conditions and seize the identified opportunity.

In the adapting capability class, the dynamic capabilities of *resource commitment* and *psychological commitment* were found. As with structural agility, the capability to commit resources increases with environmental complexity. It allows the firm to dedicate the necessary resources that the organizational change requires to capitalize on the opportunity presented in the environmental jolt, despite high risk and uncertainty. Finally, psychological commitment is essential to sustaining momentum throughout emotionally intense circumstances.

Anticipating, and coping capabilities are also found in normal market conditions and contribute towards firm competitiveness. Similarly, resource commitment is also important in a less turbulent environment, though it becomes essential in combination with the prior capabilities for resilience to be reached in an environmental jolt. Contrarily, psychological commitment is critical, for without this capability, strategic resilience is not reached. It was also found that this dynamic capability is only exercised in the conditions of an environmental jolt, and as such the different capability classes are sequential in nature.

The output of the strategic resilience stages is a competitive response from which the firm needs to gather relevant learnings, so that it can continue to develop and exercise the strategic resilience capacity at a higher level in the next event. It is prior experience, which can create a defining difference between two firms that are able to demonstrate strategic resilience in an environmental jolt. The more experience the firm has incorporated into the process, the more likely it is to achieve a competitive advantage over its competitors.

Relating the findings to prior literature, the above has several implications. First, it is one of the first concrete steps toward identifying specific dynamic capabilities within both the context of an environmental jolt and strategic resilience. Second, it supports Winnard et

al.'s (2014) position that that adaptive capacity does indeed differentiate strategically resilient organizations from others, and that a proactive strategy does develop dynamic capabilities, which is in line with Alsonso-Almeida et al.'s (2015) findings. Furthermore, most of the capabilities for robust transformation, identified by Lengnick-Hall and Beck (2005), were present in some form or another, though this paper indicates that they lie at various levels of significance in the microfoundations of dynamic capabilities, rather than being capabilities themselves. Finally, the link between prior experience, adaptive capacity and learning put forth by Bhamra et al. (2011) and Duchek (2020) was confirmed by this study.

With regard to the second research question, it was found that emotional microfoundations played a meaningful role throughout all capability classes. Within anticipating capabilities, emotional microfoundations affect the perception of environmental events, as well as the value system of the firm. This supports the arguments of Coutu (2002) in that a shared value system enables people to adopt a unified perception of events but adds depth to this argument in explaining the values must have affective roots.

In coping capabilities, emotional microfoundations are extremely important in relation to employee engagement and the overall management of emotions. Here, it was psychological safety, emotional aperture, and the culture of companionate love that facilitate bricolage, engagement, and learning. This supports prior literature by Schein (1983) on the role of individuals on collective emotions, Sanchez-Burks and Huy (2009) on emotional aperture, Nembhard and Edmondson on improvisation (2011), as well as Barsade and O'Neill (2014) on emotional culture.

Within adapting capabilities, the emotional microfoundations are largely built on those of the prior capability classes, such as psychological safety and high-quality relationships. However, it was found that the channelling and promotion of collective emotions was a distinct and important trait in psychological commitment. This is in line with Healey and Hodgkinson's (2017) arguments for emotional regulation, Stephens et al.'s (2013) work on the relationship between emotional expression and resilience, as well as Sanchez-Burks and Huy's (2009) position on the importance of collective emotions for strategic change. However, all this contrasts with Mallak (1998) who has argues that organizational resiliency is merely the outcome of a collection of resilient individuals. Rather, it was the

determination, perception, and mutual support of the collective, which made the organization of this case so strategically resilient.

6.2 Practical Implications

The findings of this study indicate that effective routines and activities that organizations develop are a prerequisite for a strategically resilient and competitive response in the face of a crisis. This means, that strong performance in a stable operating environment increases the likelihood of survival and success if the organization faces an environmental jolt. Part of developing such strong fundamental routines is a diligent focus on the firm's dynamic capabilities of shaping behaviour, structural agility, and high employee engagement.

In terms improving employee engagement, this study demonstrates that top management teams must go beyond establishing a culture in a broader sense and also pay attention to defining and implementing an emotional culture. Here, it is notable that prominent figures within an organization, be they leadership figures, founders, or other visible individuals, are major sources of emotional contagion. Particularly, it is the emotions that they are perceived to have, which has the most impact on the kind of emotional culture that is cultivated, more so if the firm in question is smaller. Thus, top management teams should also develop their emotional aperture, so that different emotional cues can be picked up on and leveraged to cultivate the type of emotional culture that is desired and supports the firm's strategic aspirations.

In terms of structures, there is undisputed evidence in this study and others, that firms should strive to implement sufficiently flexible structures that allow a degree of deviation from role boundaries, as well as agile transformation, as needed. This has a direct impact on the dynamic capability of structural agility, and it means that employees and teams should have a clear set of guidelines but must be given some freedom for improvisation. It certainly helps to think of the organization as a jazz band, who sounds even better when given the opportunity to improvise, perform solos, and even make mistakes so that they can improve for the future.

Last, developing processes and structures that support ambidexterity is in a key position, because the desire and skill for exploration is fundamentally what allows firms to seek and capture new opportunities, thereby honing the shaping behaviour capability. The

effort to balance exploration and exploitation should be continuous and conscious, with adequate resources dedicated to both endeavours.

6.3 Suggestions for Further Research

Going forward, the research into strategic resilience and dynamic capabilities would benefit from a longitudinal study into weather the response that is generated by firms during an environmental jolt leads to a sustained competitive advantage in the long-term. This could also be done through the use of quantitative data, which could be utilized to measure firm performance in relation to the strategic response adopted by firms during the pandemic, for instance. In relation to this, it would also be useful to study the degree to which the identified dynamic capabilities for strategic resilience fulfil the VRIN-attributes, for that determines their significance for generating a sustainable competitive advantage.

Furthermore, both research fields would greatly benefit from a broader body of research into the emotional microfoundations of dynamic capabilities. This would be especially interesting in the context of large and incumbent firms, where the emotional dynamics are very different than those of a smaller firm. In this context, it would be useful to study who the cultivators of collective emotions are, what gives rise to their greater influence, and how they should be managed to mitigate or enforce desired emotions.

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APPENDIX A: INTERVIEW GUIDE

1. Voisitko kuvailla tapahtumaketjua alkaen siitä kun liiketoimintaa harjoitettiin vielä normaalissa toimintaympäristössä?
    a. Mistä ja miten haitte informaatiota joka johti tähän päätökseen/vei prosessia eteenpäin?
    b. Mitkä olivat keskeiset haasteet?
    c. Mitkä olivat suuremmat huolet prosessin aikana?
2. Miten itse koit tilanteen?
    a. Mitä tunteita se herätti?
    b. Miten tämä vaikutti omaan toimintaasi?
    c. Mitä olet oppinut itsestäsi/muista?
3. Mitä eri vaihtoehtoja punnitsitte tulevaisuutta ajatellen?
    a. Miten teitte tämän käytännössä?
    b. Ketkä olivat osallisena päätöksenteossa?
    c. Mitä vaihtoehtoja nousi esille?
    d. Miten arvioitte eri vaihtoehdot? Mitkä tekijät olivat arvioinnissa mukana?
    e. Miten päädyitte valitsemaanne vaihtoehtoon?
    f. Mikä oli aikajänne jota mietitte?
4. Miten luulet muiden kokevan tilanteen?
    a. Keskustelitteko asiasta yhdessä?
    b. Uskotko, että osallisten tunteet vaikuttivat liiketoimintaan kevään aikana? Miten?
5. Mistä idea käsidesin valmistukseen sai alkunsa?
    a. Mitkä motiivit vaikuttivat päätökseen?
    b. Miten kuvailisit sen sopivan strategiaanne?
    c. Konsultoitteko ulkopuolisia tahoja asiaan liittyen?
    d. Onko aloite ollut onnistunut? Miten tätä arvioidaan?
    e. Onko liiketoiminta pysyvä osa tuoteportfoliota?
6. Nousiko päätöksenteon aikana esiin mitään erimielisyyksiä?
    a. Minkälainen rooli intuitiolla on päätöksenteossanne?
    b. Kuvailistko tiimi dynamiikkaanne ja ilmapiiriä päätöstentekijöiden keskuudessa?
7. Voisitko kuvailla miten uudet ideat Kyröllä yleensä saavat alkunsa?

a. Onko väliä keneltä ne tulee?
b. Kannustaako kulttuurinne siihen?
c. Voisitko kertoa esimerkin tällaisesta tilanteesta?
d. Miten idean kanssa yleensä edetään?
e. Onko kyseessä järjestelmällinen tapa toimia näin?

8. Onko laajentuminen käsidesin valmistukseen muuttanut omaa kuvaanne Kyröstä organisaationa?
    a. Mikä Kyröllä työskentelevillä on yleinen suhtautuminen muutoksiin?
9. Onko organisaatiossanne joitain tiettyjä vakiomuotoisia prosesseja?
    f. Liittyen tuotekehitykseen?
    g. Minkälaisia käytäntöjä teillä on tiedon jakamiseen?
    h. Miten kulttuuri ja arvot ohjaavat tekemistä?
10. Voisitko kuvailla miten Kyrö on järjestäytynyt organisaationa?
    i. Onko erilaisia työryhmiä?
    j. Miten ulkomaan yksiköt toimivat?
    k. Missä on päätöksentekovalta?
    l. Minkälainen hierarkinen struktuuri?
    m. Minkälainen strategia teillä on?